16/8/4 CH H.264 Multiplex DVR

User Manual

Models:
DVR-4C, DVR-8C, & DVR-16C

500-216 revA

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of unprotected “Dangerous voltage" within the product's enclosure that may be strong enough to cause a risk of electric shock.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

NOTE: This equipment has been tested and found to comply with the limits for a class digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office , your household waste disposal service or the shop where you purchased the product.

All the safety and operating instructions must be read before the unit is operated.

- **Make sure to switch the power off before you install the DVR.**
- **There is the danger of an electric shock if the DVR is opened by an unqualified service engineer or installer.**
- **Avoid using the DVR outside of the reference temperature and humidity indicated in the specification.**
- **Avoid exposing the DVR to violent movement or vibration.**
- **Do not use or store the DVR in direct sunlight or near to any source of heat.**
- **Do not place any object into the holes used for air circulation.**
- **Always use the DVR in a well ventilated location to prevent overheating.**
- **Risk of explosion if battery is replaced by an incorrect type.**
- **Dispose of used batteries according to the instructions.**
- **The recommended HDD types are Samsung Electronic, Western Digital and Seagate.**

TABLE OF CONTENTS

Chapter 1 Features 1
Chapter 2 Packing Detail 2
Chapter 3 Location and Control 3
3.1 Front Panel Controls 3
3.2 Real Panel Connectors 6
3.3 Remote Controller 7
3.4 Mouse Control 8
Chapter 4 Installation 9
4.1 TOTAL CONNECTION LAY-OUT 9
4.2 HDD INSTALLATION 10
4.3 MAIN DEVICES INSTALLATION 12
4.3.1 Camera 12
4.3.2 Audio 12
4.3.3 Monitor 13
4.4 SENSOR INPUT 14
4.4.1 Sensor Input Menu Setup 14
4.5 RS-485 15
4.5.1 RS-485 Menu Setup 15
4.5.2 PTZ Camera Installation 15
4.5.3 PTZ Camera Operation 16
4.5.4 PTZ Camera Preset Mode 16
4.6 Relay Output 17
Chapter 5 Basic Operation and Menu Setup 18
5.1 Basic Operation 18
5.1.1 Power ON/OFF 18
5.1.2 Screen Display 18
5.1.3 System Status 19
5.1.4 Audio Control 20
5.1.5 PIP Mode 20
5.1.6 DIGITAL ZOOM 20
5.1.7 Menu Operation 21
5.2 SCREEN 21
5.2.1 AUTO SEQUENCE 21
5.2.2 DISPLAY 22
5.2.3 TITLE 23
5.2.4 COVERT 24
5.2.5 SPOT 24
5.2.7 CAMERA 25

5.3 SYSTEM 25
5.3.1 HDD 26
5.3.2 CLOCK 26
5.3.3 VIDEO STANDARD 27
5.3.4 LANGUAGE 27
5.3.5 REMOTE CONTROL ID 27
5.3.6 KEY ECHO 27
5.3.7 ADVANCED SETUP 28
5.3.8 FIRMWARE UPGRADE 30
Chapter 6 Record Operation and Menu Setup 31
6.1 Record Operation 31
6.2 QUICK SETUP 32
6.3 RECORD SETUP 34
6.4 EVENT SETUP 35
6.4.1 MOTION DETECTION 35
6.4.2 EVENT SCREEN MODE 35
6.4.3 EVENT MESSAGE 36
6.4.4 EVENT MESSAGE RESET 36
6.4.5 EVENT BUZZER 36
6.4.6 EVENT RECORD 36
6.5 OTHER RECORD SETUP 37
6.5.1 PREVIEW QUALITY 37
6.5.2 AUDIO RECORD 38
6.5.3 REPEAT RECORD 38
6.5.4 PLAY MODE 38
6.5.5 HOLIDAY 38
Chapter 7 Search Operation and Menu Setup 39
7.1 CALENDAR SEARCH 39
7.2 SEARCH&COPY 40
7.3 TIME SEARCH 40
7.4 EVENT SEARCH 41
7.5 BLOCK SEARCH 41
7.6 FILE SEARCH 42
7.7 BOOKMARK SEARCH 42
7.8 LOG FILE SEARCH 42
7.9 SEARCH BUTTON INFORMATION 43
Chapter 8 Copy Operation and Menu Setup 45
8.1 COPY 45
8.1.1 Copy to USB Storage Device 45
8.1.2 Copy to DVD±RW 46

8.1.3 STOP COPY....46
8.1.4 CONTINUE COPY....46
8.2 COPY STATUS....47
8.3 FORMAT MEDIA....47
Chapter 9 Network Setup and Operation....48
9.1 NETWORK SETUP....48
9.2 DVR-VIEWER INSTALLATION....49
9.2.1 System Requirement....49
9.2.2 Network Environment....49
9.2.3 Installation Steps....49
9.3 DVR-Viewer Control Panel Introduction....51
9.4 DVR-Viewer Operation....52
9.4.1 DVR-Viewer Software Password....52
9.4.2 DVR List....52
9.4.3 HDD Search....53
9.4.4 File Search....54
9.4.5 Arrange Windows....55
9.4.6 Viewer Option....55
9.4.7 Display....56
9.4.8 DVR Controller....57
9.4.9 PTZ Controller....57
9.4.10 SETUP....58
9.4.11 STATUS....61
9.4.12 PRINT....61
9.4.13 COPY....62
9.4.14 SEARCH....62
9.4.15 Record and Playback Control Buttons....62
Chapter 10 Additional Function Operation and Menu Setup....63
10.1 E-mail....63
Chapter 11 Specification....65

The author assumes no responsibility for any errors or omissions that may appear in this document nor does the author make a commitment to update the information herein.

Chapter 1 Features

- H.264 compression for DVR recording and web transmission
- Graphic OSD and mouse control(PS/2)
- Live display, record, backup, playback and network access as the same time
- DVD writer (optional) and USB device backup
- Remote view and manage through 16CH client software and IE browser
- Audio recording
- Motion detection with area selecting and sensitivity adjusting by each camera
- Remote controller
- Email notification
- Control all functions of PTZ camera
- TCP/IP, DHCP, DDNS, Dynamic IP network protocol
- System auto recovery after power reconnected
- Watermark proof
- Manual / event / schedule recording
- Multi-language OSD: English /Polish / Spanish / Russian / Traditional Chinese / French / Turkish / German / Italian / Portuguese

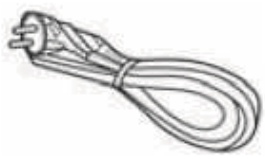
Chapter 2 Packing Detail

1. DVR

2. Client Viewer Software CD

3. User Manual

4. Remote Controller



5. Power Cord

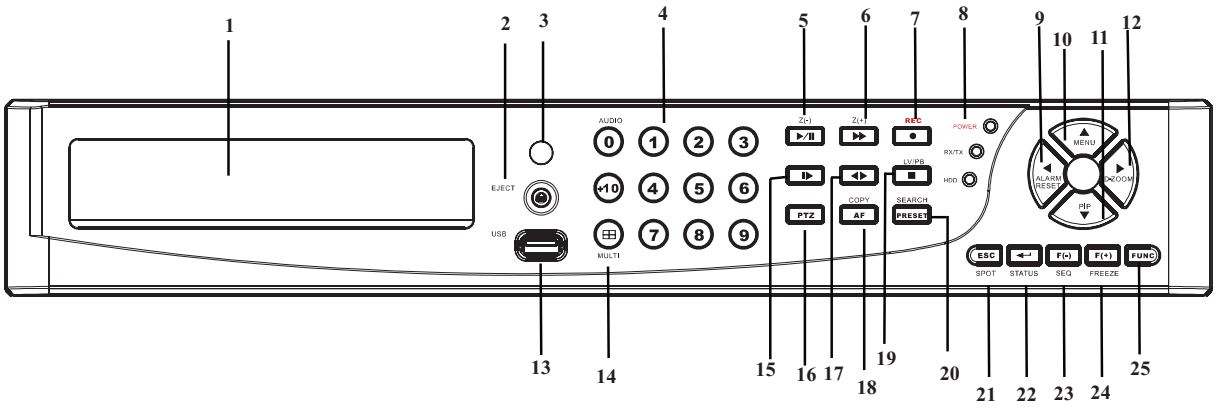
6. Power Adapter

7. Battery

CONTENTS
1. DVR
2. Client Viewer Software CD
3. User Manual
4. Remote Controller
5. Power Cord
6. Power Adapter
7. Battery

Chapter 3 Location and Control

3.1 Front Panel Controls



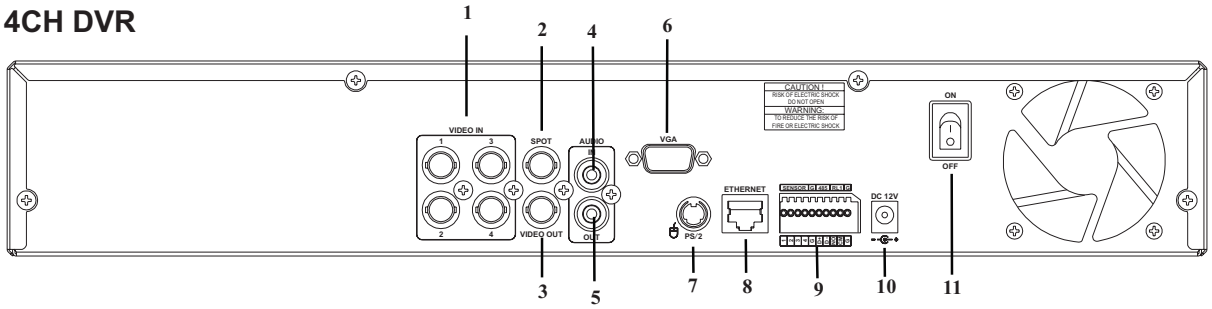
Item		Description
1	DVD-RW	A DVD-RW drive is installed in the front bay. (sold separately)
2	EJECT	Press EJECT button to open/close the DVD-RW drive.
3	IR RECEIVER	Infrared signal receiver for the IR remote controller. Do not block the receiver as a clear line of sight is required for proper operation.
4	NUMERIC BUTTON / CHANNEL SELECT	(a) selects a specific channel number to be displayed in full screen (b) enter the numeric password when prompted (c) number 0 for audio function
5	PLAY / PAUSE (▶/II) / Z(-)	(a) Starts the playback of recorded data. By default, the playback starts from the earliest recording. (b) Toggles between playback and pause mode (c) Zoom out (PTZ mode)
6	FAST (▶▶) /Z(+)	(a) Fast forward. Press this button repeatedly to toggle between 2X normal playback speed through 128X normal playback speed. (b) Zoom in (PTZ mode)
7	RECORD (●)	This button starts and stops the recording mode.
8	STATUS LED	Displays the status of the DVR (standby), HDD read/write and network transmission.
9	ALARM RESET / LEFT DIRECTION BUTTON (◀)	(a) resets the alarm buzzer (b) left pans in PTZ mode (c) navigates left in the menu screen (d) moves the zoom box left in zoom mode

10	MENU / UP DIRECTIONAL BUTTON (▲)	(a) accesses the main menu screen (b) tilts up in PTZ mode (c) navigates up in the menu screen (d) moves the zoom box up in zoom mode
11	PIP / LOOP PLAYBACK CLEAR / DOWN DIRECTIONAL BUTTON (▼)	(a) activates the picture-in-picture mode (b) tilts down in PTZ mode (c) navigates down in the menu screen (d) moves the zoom box down in zoom mode (e) clears the loop playback in playback mode
12	DIGITAL ZOOM / RIGHT DIRECTIONAL BUTTON (▶)	(a) enters digital zoom mode (b) pans right in PTZ mode (c) navigates right in the menu screen (d) moves the zoom box right in zoom mode
13	USB 2.0	The USB 2.0 port can be used to connect to numerous USB 2.0 backup devices.
14	MULIT (DISPLAY)	This button is used to toggle between multiple display modes: 16, 13, 10, 9, 7, 6 and 4 channel split screen display modes.
15	SLOW (▮▶)/ IRIS CLOSE / PIC BY PIC	(a) Slow playback. Press this button repeatedly to toggle between 1/2 normal playback speed through 128 normal playback speed. (b) Control the iris close in PTZ mode (c) control the playback picture by picture
16	PTZ / BOOKMARK	(a) enters PTZ control mode (b) creates a bookmark during playback mode
17	DIRECT ION(◀▶)	(a) Change the playback direction. (b) Control the iris open in PTZ mode (c) Control the playback picture by picture
18	COPY / AUTO FOCUS	(a) enters the copy menu screen (b) switches the PTZ camera to auto focus mode in PTZ mode
19	STOP (■)	Switches the Playback mode to LIVE mode.
20	SEARCH / PRESET	(a) enters the search menu screen (b) sets the preset positions in PTZ mode
21	SPOT MONITOR / ESC	(a) Activates the spot monitor control (b) Returns to previous menu screen (c) Exits from various function and menu screen

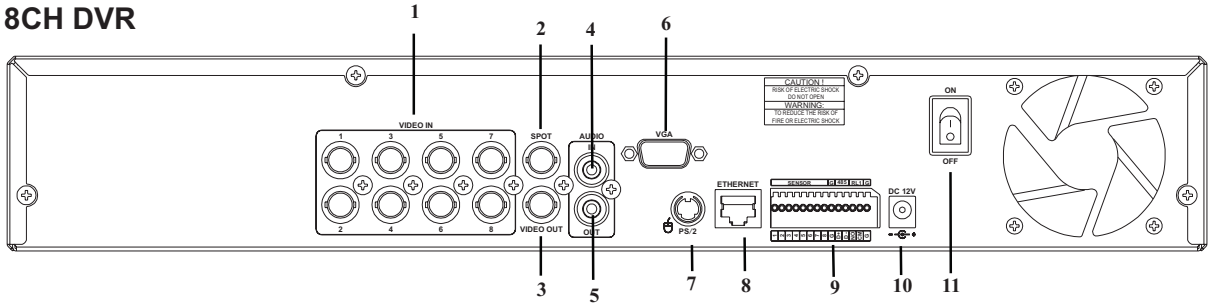
22	ENTER / STATUS / HOME	(a) executes the selected function in the menu screen or enters the selected submenu (b) accesses the status window from the main screen (c) returns the PTZ camera to “home” mode in PTZ mode (d) increases the digital zoom ration in zoom mode
23	AUTOMATIC SEQUENCE / FOCUS OUT / DECREASSE VALUE / SECTION A	(a) activates and deactivates the automatic channel sequence (b) focuses out in PTZ mode (c) decreases the value of a selection in the menu screen (d) sets the starting point for loop playback in playback mode
24	FREEZE / FOCUS IN / INCREASE VALUE / SECTION B	(a) freezes the live screen (b) focuses in PTZ mode (c) increase the value of a selection in the menu screen (d) sets the ending point for loop playback in playback mode
25	FUNCTION	Use with other buttons.

3.2 Real Panel Connectors

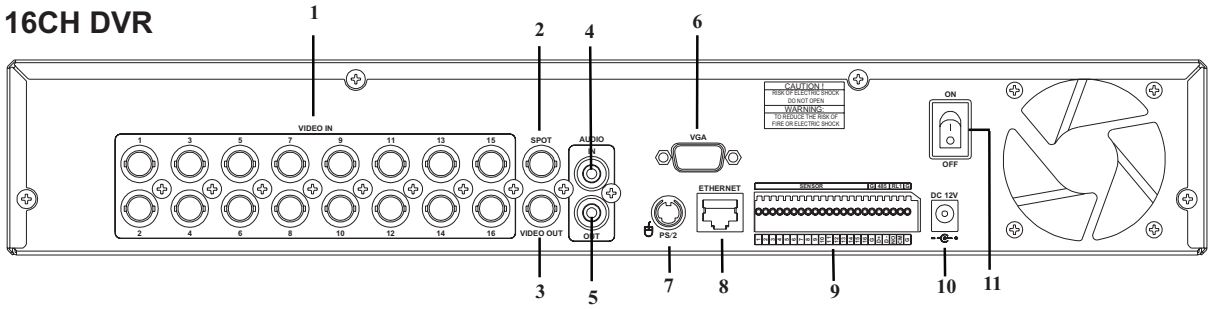
4CH DVR



8CH DVR

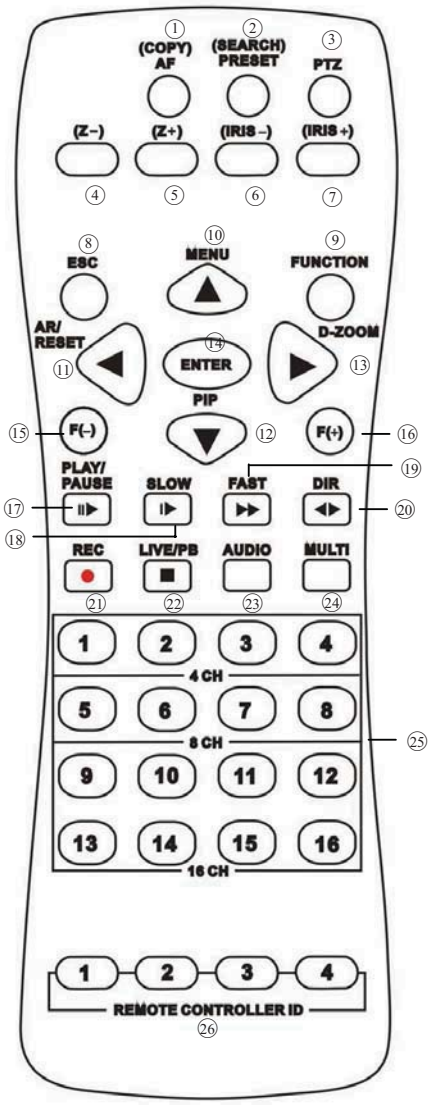


16CH DVR



Item		Description
1	VIDEO IN	BNC input ports for cameras
2	SPOT	BNC output port for spot monitor
3	VIDEO OUT	BNC output port for the main monitor
4	AUDIO IN	RCA input port for an audio signal
5	AUDIO OUT	RCA output port for an audio signal
6	VGA	Output port for the VGA monitor
7	PS/2	PS/2 mouse connection port
8	ETHERNET	Port for 10/100Mbps Ethernet
9	SENSOR/RS-485/ RELAY OUT	Input terminal blocks for alarm signals/Terminal blocks of RS-485/Relay output termainal blocks
10	POWER IN	Socket for DC 12V power adapter
11	POWER SWITCH	Switch to turn the power on/off

3.3 Remote Controller



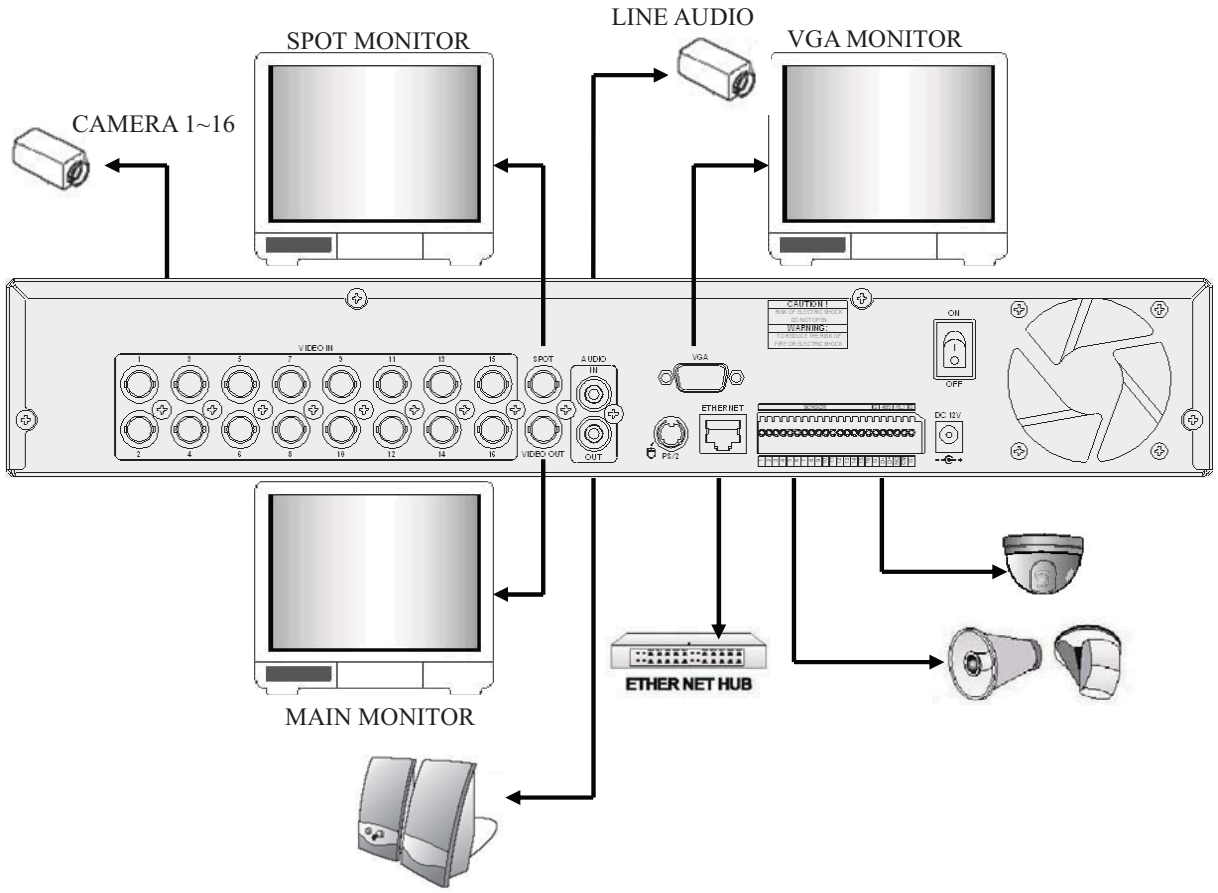
按鍵名稱	描述
① COPY/AF	Enter the COPY menu / Auto Focus Mode (PTZ control mode)
② (SEARCH) / PRESET	Enter the SEARCH menu / sets the preset positions in PTZ mode
③ PTZ / BOOKMARK	Enter PTZ control mode / creates a bookmark during playback mode
④ Z-	Zoom Out (PTZ control mode)
⑤ Z+	Zoom In (PTZ control mode)
⑥ IRIS -	Control the iris close in PTZ mode
⑦ IRIS+	Control the iris open in PTZ mode
⑧ ESC	Exit / Activates the SPOT monitor control
⑨ FUNCTION	Use with other buttons
⑩ (▲) / MENU	Up directional button / Enter Menu Setup
⑪ AR/ RESET / (◄)	Alarm reset / Left directional button
⑫ (▼) / (PIP)	Down directional button / Enter the PIP mode
⑬ DIGITAL ZOOM / (►)	Enter Digital Zoom mode / Right directional button
⑭ ENTER	Enter / Enter the STATUS menu
⑮ F(-)	Decreases the value of a selection / Activates and deactivates the automatic channel sequence
⑯ F(+)	Increases the value of a selection / Freezes the LIVE screen
⑰ PLAY / PAUSE (⏯)	PLAY / PAUSE
⑱ SLOW (⏯)	Slow playback
⑲ FAST (▶▶)	Fast forward
⑳ DIR (◀▶)	Change the playback direction
㉑ RECORD (●)	Starts and stops the recording mode
㉒ LIVE/PB / (■)	Switches the LIVE mode and Playback mode / STOP
㉓ AUDIO	Audio function
㉔ MULTI	Multi display mode
㉕ CAMERA BUTTONS	Numeric button / Channel select
㉖ REMOTE CONTROLLER ID	REMOTE CONTROLLER ID

3.4 Mouse Control

① Double-click of the left button	Status display
③ One-click of the right button	Menu display
③ Double-click of the right button	Exit
② Turning the wheel scroll	Value change
① Double-click on the item or icon	Select

Chapter 4 Installation

4.1 TOTAL CONNECTION LAY-OUT



4.2 HDD INSTALLATION

First, please remove the HDD holder from the DVR machine. (Pic1)。

(Pic1)

Lock HDD holder symmetirically in the two sides of HDD. (Pic2, Pic3)

(Pic2)

(Pic3)

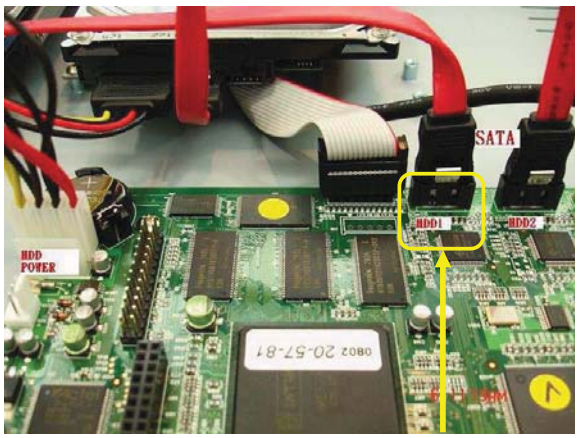
Insert the SATA cable and power cable into SATA HDD. (Pic4)

(Pic4)

Lock the HDDs onto DVR machine. (Pic5)。

(Pic5)

Insert the SATA cables into the sockets on the main board (Pic6). Make sure the HDD1 cable insert into HDD1 socket. Now, the installation was finished (Pic7).



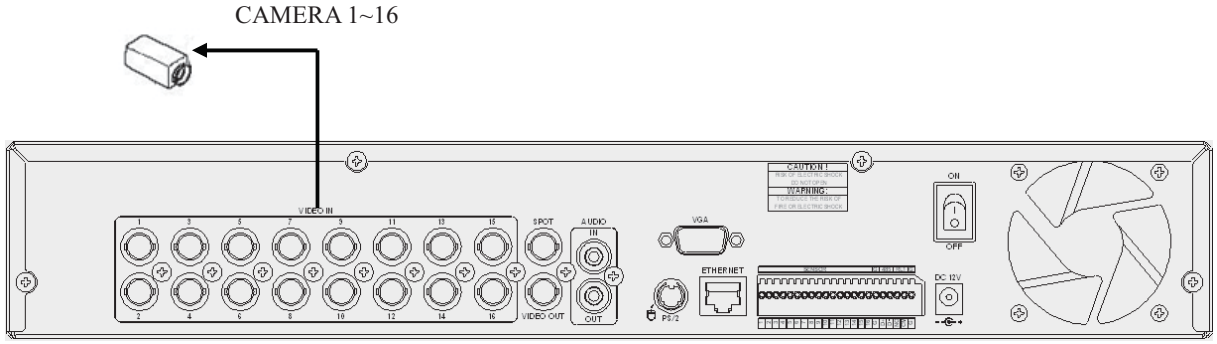
(Pic6)

HDD1

(Pic7)

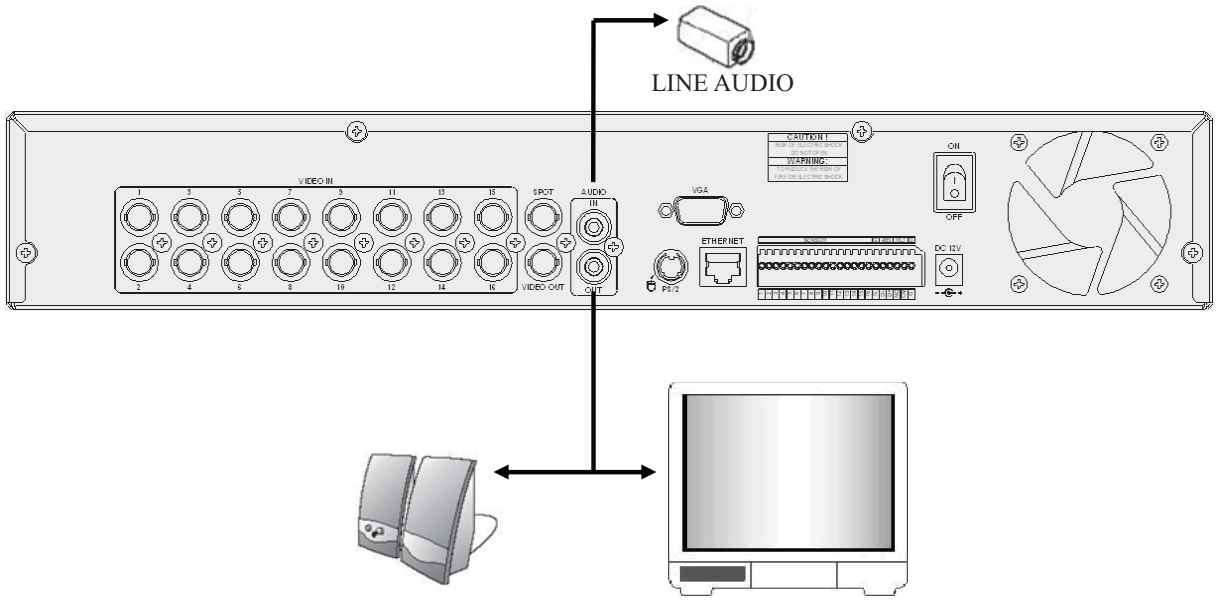
4.3 MAIN DEVICES INSTALLATION

4.3.1 Camera



* Connect a female BNC connector of each camera to a male BNC connector, “CAMERA IN” port.

4.3.2 Audio



Audio Input

- AUDIO IN: Connect the RCA Line Jack of the relevant equipment (for example, a camera with a built-in microphone) to the AUDIO IN port.

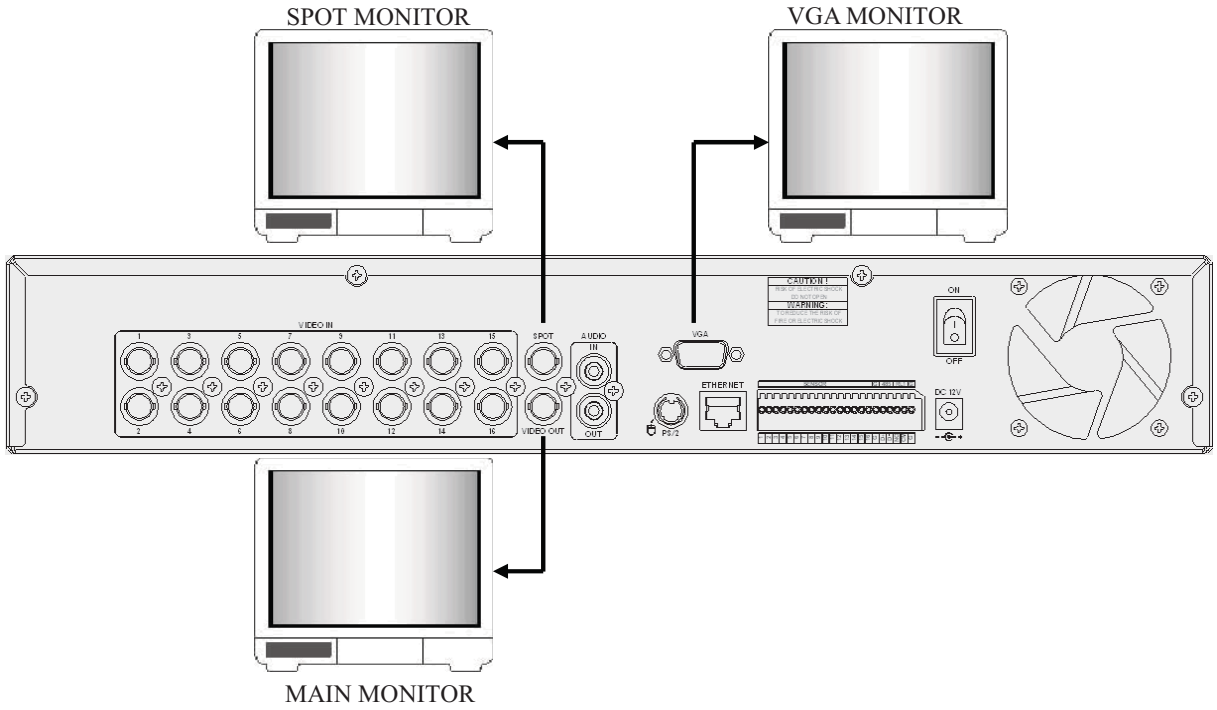
Audio Output

- AUDIO OUT: Connect the RCA Line output to a monitor with a built-in speaker.

NOTE

- This DVR can be connected only with a line audio and not support a microphone for audio input and output. To record audio should be enable in the AUDIO setup at the MENU setup.
- You can hear the audio under LIVE mode and Playback mode. And select any one channel’s audio and image input from full-screen mode or multi-display mode.

4.3.3 Monitor

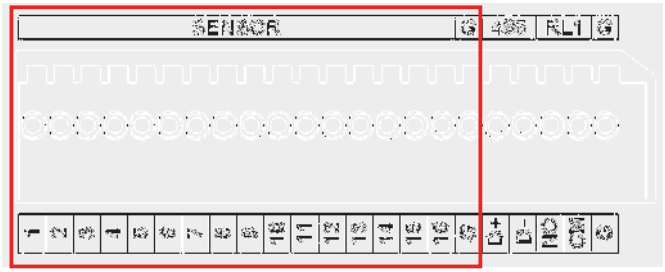


DVR supports two types of monitor output, one is Composite output (BNC connector); the other one is VGA output (DSUB-15). But you can just select one monitor output type at a time.

* Composite Output:
(1) Power off
(2) Press the MENU button and CH3 button at the same time
(3) Power on
(4) When you hear a beep sound, it means images already output to the Composite port. Now you can release the buttons.

* VGA Output:
(1) Power off
(2) Press the MENU button and CH4 button at the same time
(3) Power on
(4) When you hear a beep sound, it means images already output to the VGA port. Now you can release the buttons.

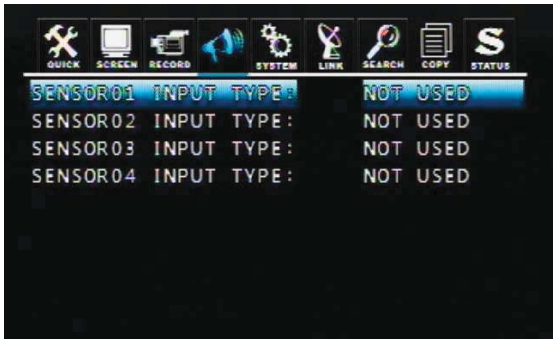
4.4 SENSOR INPUT



16CH: SENSOR 1~SENSOR 16
8CH: SENSOR 1~SENSOR 8
4CH: SENSOR 1~SENSOR 4

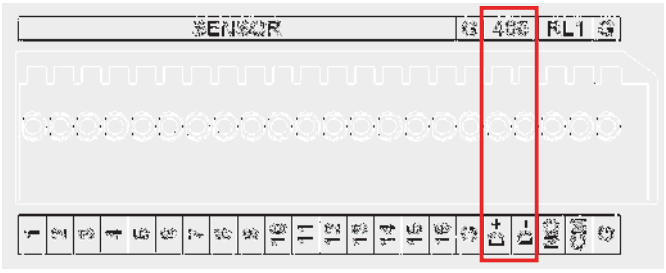
4.4.1 Sensor Input Menu Setup

Enter EVENT -> SENSOR INPUT menu to select the correct sensor input type which connected with DVR.



Select the right sensor type according to the type of installed sensor with the unit.
- NORMAL OPEN: The sensor is open in normal times.
- NORMAL CLOSE: The sensor is close in normal times.
- NOT INSTALLED: No sensors are connected to the DVR unit

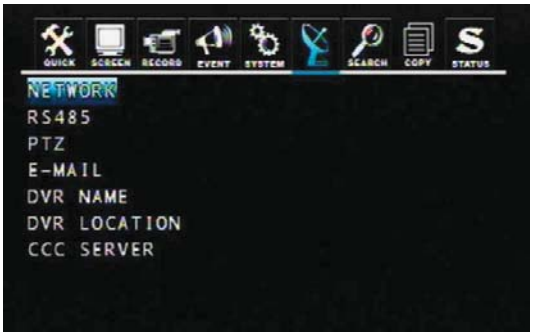
4.5 RS-485

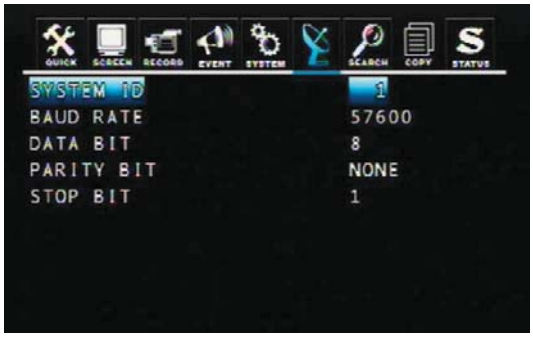


RS485 is use for connect to external device, such as keyboard or PTZ camera.

4.5.1 RS-485 Menu Setup

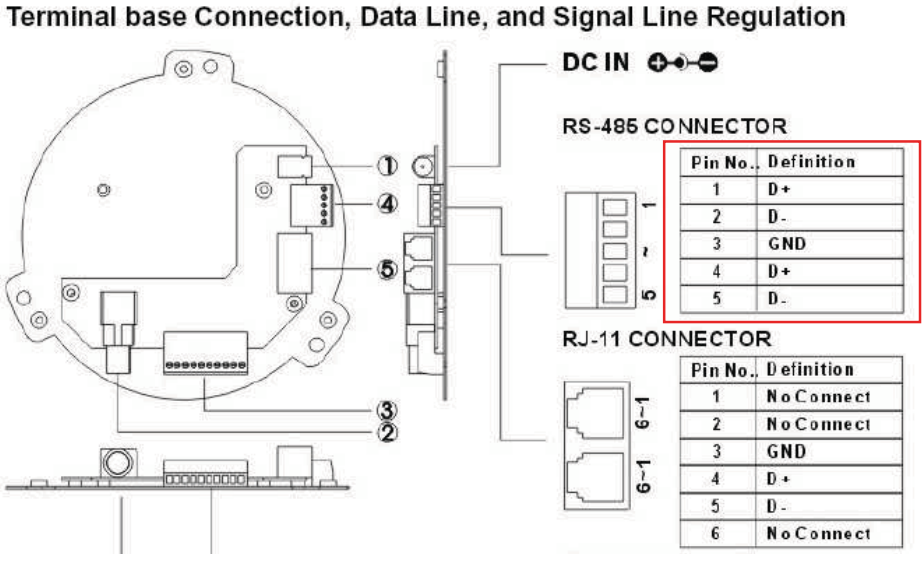
Enter LINK -> RS485 menu to set the parameters of RS-485 device which connected with DVR (The parameters must the same with the device).



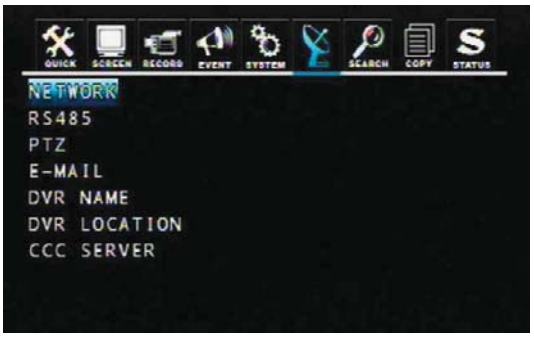


4.5.2 PTZ Camera Installation

Connect the PTZ camera to DVR RS-485 interface (D+ to D+; D- to D-), and then connect the camera output to the desired channel.

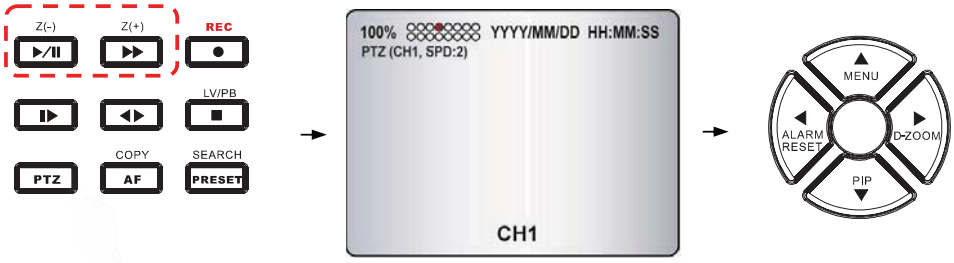


Enter LINK -> PTZ menu to set the parameters of PTZ camera which connected with DVR (The parameters must be same with PTZ camera).



4.5.3 PTZ Camera Operation

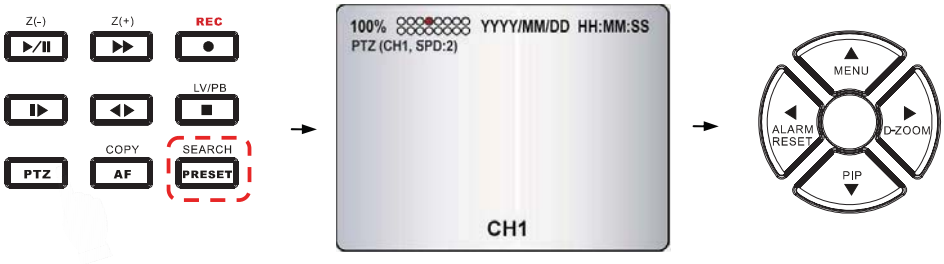
1. Select the desired PTZ camera channel.
2. Press the PTZ button to enter the PTZ mode.



3. Use the direction buttons to change camera position.
4. Press Z(+) and Z(-) buttons to control the camera zoom in and zoom out.
5. Press the PTZ button again to exit the PTZ mode.

4.5.4 PTZ Camera Preset Mode

1. Select the desired PTZ camera channel.
2. Press the PTZ button to enter the PTZ mode.
3. Press the PRESET button to enter the “PTZ(PRESET)SET” mode.

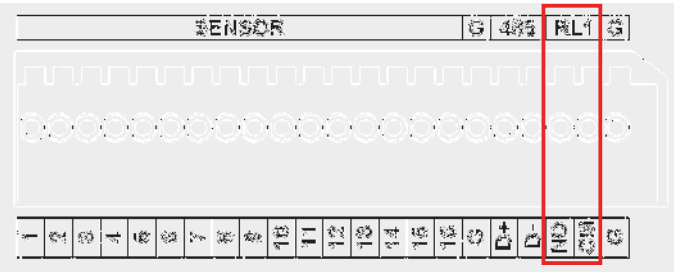


4. Use the direction buttons to adjust the camera position you want.
5. Press one number button to remember this preset camera position, for example: press the “1” button, it means the position of the preset point 1.
6. Press the PRESET button again to enter the “PTZ(PRESET)MOVE” mode.
7. Press the number button, you can move the camera to the preset point you want.
8. Press the PRESET button again to back to the normal PTZ mode.
9. Press the PTZ button again to exit the PTZ mode.

Preset point is a convenient usage of PTZ camera. It is a preset user-defined camera position, user can

move the camera position very quickly when needed.
16CH DVR has the Programming capacity for 16 preset locations.
8CH DVR has the Programming capacity for 8 preset locations.
4CH DVR has the Programming capacity for 4 preset locations.

4.6 Relay Output



Enter EVENT -> RELAY OUTPUT menu to select the Relay type which connected with DVR.

DVR provides a Relay output interface, the following events will trigger off the Relay signal:
<RELAY SELECT>
ALARM: Sensor Input
LOSS: Video Loss
MOTION: Motion Detection
HDD ERROR
POWER: Power break
USER: Manual Relay Output

NOTE: Use the FUNCTION button to enter the manual Relay mode
- NC→NO: Press the F(+) button
- NO→NC: Press the F(-) button
- Press the FUNCTION button again to exit this mode

REC: Record break
NOT USED
<RELAY OUTPUT TIME>: 1~30 sec.

Chapter 5 Basic Operation and Menu Setup

5.1 Basic Operation

5.1.1 Power ON/OFF

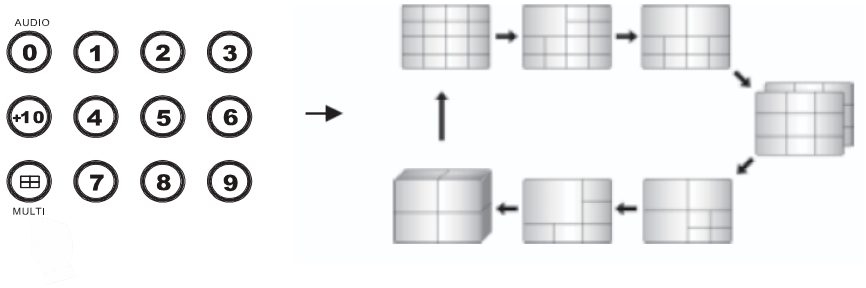
After the connection of power adaptor and other devices(HDDS) with this DVR, turn the power on.

a. The video signal system (NTSC or PAL) is automatically detected.
b. Power Failure Recovery
   This DVR automatically reverts back to programmed record parameters upon power restoration.

If there is no video signal, the video signal system is set to NTSC. Do not input the PAL type video signal or it may cause the DVR's malfunction. In this case, turn off and on again.

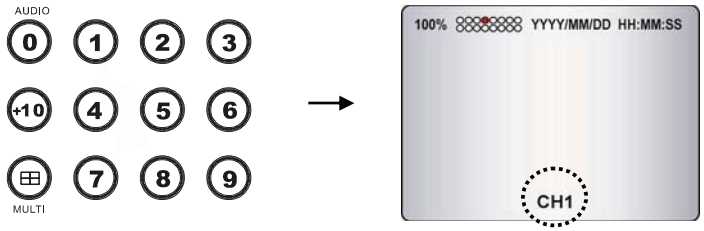
5.1.2 Screen Display

a. Multi display



To change a single camera display to the multi camera, press the MULTI button.

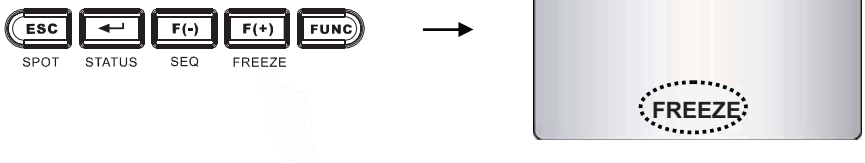
b. Full screen display



Press the desired camera number button to display on the monitor.

NOTE:
-Use the +10 Button when you select two digit camera numbers.
EX) Camera Number 12 = Press the +10 Button, and then press the No. 2 Button.
-CAMERA/NUMBER INPUT buttons are used to input the password in the password lock function as well.

c. Freeze



Press the FREEZE button in the LIVE mode, the screen will be freezed.
Press the FREEZE button again to release the FREEZE mode.

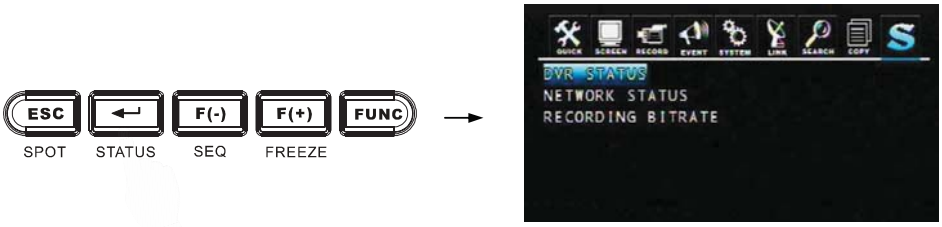
- FREEZE function is not available, when auto mode is selected.

d. LIVE/Playback mode switching

Press the LV/PB (■) button in the Playback mode, you can switch to the LIVE monitoring mode.

5.1.3 System Status

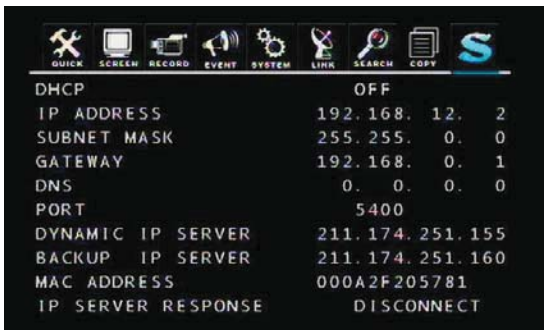
① Press the “STATUS” button, the SYSTEM STATUS menu will appear.
② Select the item you want: DVR Status, Network Status or Recording Bitrate, you can see the detail information.
③ Press the “ESC” button to exit the menu.



DVR status:

FIXED HDD TOTAL SPACE 476950 MB
FIXED HDD FREE SPACE 152724 MB
RECORD PROGRAM PROGRAM6
USB STORAGE NOT INSTALL
USB CD/DVD NOT INSTALL
SOFTWARE VERSION T_018_Y
HARDWARE VERSION 1.1

Network status:

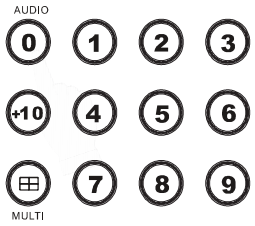


* Please refer to 9.1 Network Setup.

Recording Bitrate:

This page shows the present RECORDING BITRATE of DVR. High bitrate means it’ll need more HDD space.

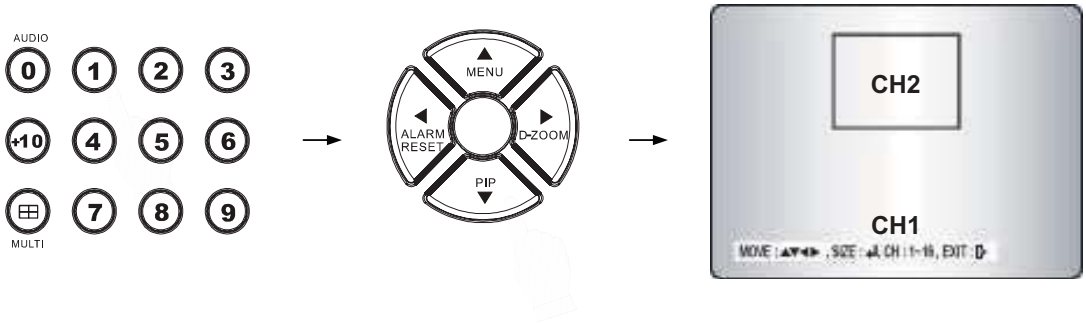
5.1.4 Audio Control



Audio ON/OFF: Press the FUNCTION button and then press the “AUDIO (0)” button to open/close the DVR audio function. You can hear audio of selected channel regardless of monitoring screen.

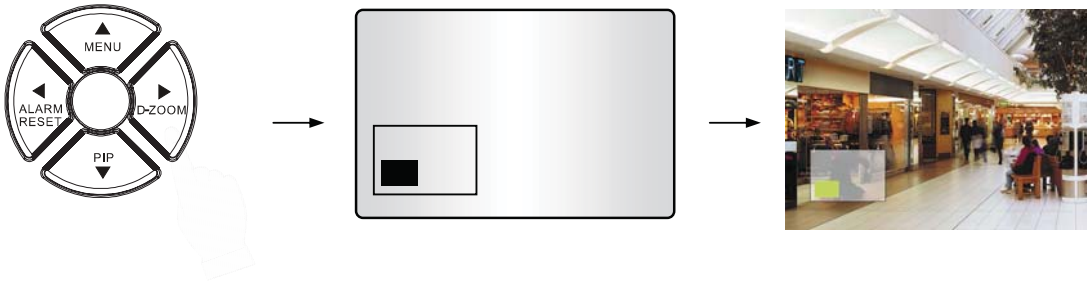
5.1.5 PIP Mode

① Select a single camera in live view, and then press the PIP button and the following screen will be displayed. (For example: CH1)



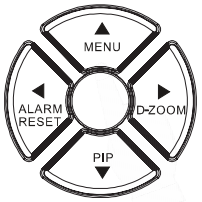
② Select the desired camera that will be displayed on the PIP screen (For example: CH2, but can not select the same camera with present (CH1)).
③ Press the ENTER button to make the 2 times PIP screen size and use the ▲, ▼, ◀, ▶ buttons to move the position of PIP screen.
④ Press the ESC button to exit this mode.

5.1.6 DIGITAL ZOOM



- Select the desired camera channel.
- Press the D-ZOOM button, the indication screen appears on the main screen.
- Press ▲, ▼, ◀, ▶ buttons to select the desired location.
- Press the ENTER button to change the zoom size x2 ~ x4.
- Press the ESC button to exit this screen.

5.1.7 Menu Operation



- Press the MENU button to enter the main menu screen.
- Move the cursor to desired position using the ▲ , ▼ , ◀ , ▶ buttons, then press the ↵ button to enter each submenu.
- Change the value using the F(-) , F(+) buttons or truning the wheel scroll of mouse.
- Select the item to exit the menu setup, you will see the following screen:

Select save or not, then you can exit the menu setup.

If there is no input for 1 minute during the menu screen display, the menu screen will be closed automatically without saving of changed value.

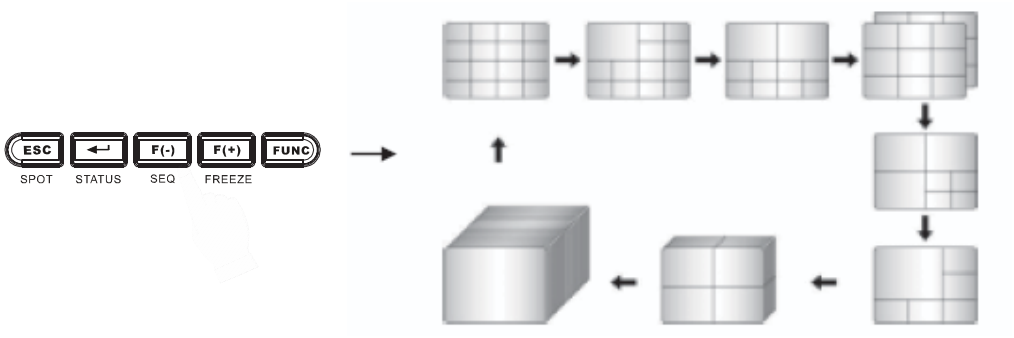
5.2 SCREEN

5.2.1 AUTO SEQUENCE

To set the length of time for switching each channel in the AUTO SEQUENCE mode. The value is from 1SEC to 60SEC and the default is “3SEC”.

ADD AUTO SINGLE: If selected OFF, every single channel will be skipped in the AUTO SEQUENCE mode. The default is “OFF”.
VIDEO LOSS SKIP: If selected ON, every VIDEO LOSS channel will be skipped in the AUTO SEQUENCE mode. The default is “ON”.

Auto Sequence Display



<ADD AUTO SINGLE: ON>

- Press the SEQ button, each screen display will be automatically switching according to the AUTO SEQUENCE setup.
- Press the SEQ button again to exit the AUTO SEQUENCE mode.

NOTE: If an event takes place, the AUTO SEQUENCE mode will be cancelled.

5.2.2 DISPLAY

To decide which information will be displayed on the screen:

HDD Free Space
If the value is ON, the remaining capacity of the fixed HDDs will be displayed on the screen. The default is ON.

HDD Free Space Mode

The default is “PERCENT”.

PERCENT: Remaining capacity of the fixed HDDs will be displayed on the screen in percent.
GIGABYTE: Remaining capacity of the fixed HDDs will be displayed on the screen in gigabyte.

Record Status

ON: Displaying the recording status of each channel on the screen. The default is ON.

Clock Display

ON: The date and time will be displayed on the screen. The default is ON.

Date&Time Mode

Choose from “YY/MM/DD” or “MM/DD/YY” or ”DD/MM/YY”. The default is “YY/MM/DD”.

YY/MM/DD: All date and time will be displayed in numbers.
Ex. 2005/01/01 00:00:00
MM/DD/YY: the month section will be displayed in character.
Ex. JAN. 01 2005 00:00:00
DD/MM/YY: the month section will be displayed in character.
Ex. 01. JAN 2005 00:00:00

Title Display

ON: Each channel title will be displayed on the screen. The default is ON.

Title Mode

Title can be displayed as TEXT or BITMAP (a graphics file) format. The default is TEXT.

TEXT: Use the characters or symbols in the CHARACTER TABLE as Title name.
BITMAP: If you need other language or characters to name the Title, you can download the bitmap file through the client viewer software. Please refer to 9.4.10.

Border Color

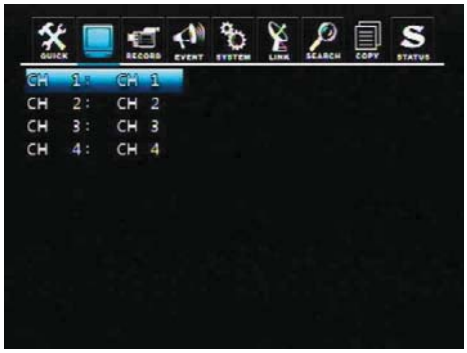
To define the color of the border line under multi display mode. The default is WHITE.

Remote Control ID

ON: The remote controller ID will be displayed on the screen. The default is OFF.

5.2.3 TITLE

To name or modify the channel title.



Press the ENTER button after selecting desired channel and the following screen appears:

Select the character using the ▲, ▼, ◀, ▶ buttons and then press ↵ button. Press the ESC button to exit the character table.

5.2.4 COVERT

ON: The images of the selected channel will be hid and displayed in black screen, but doesn't affect the recording status. The default is OFF.

SELECT: "LV&PB&NW", "PB&NW", "LV&NW", "LV&PB", "NETWORK", "PLAY" and "LIVE".
LV(LIVE): To covert selected channels on live screen.
PB(PLAY): To covert selected channels on playback screen.
NW(NETWORK): To covert selected channels on network viewer screen.
COVERT TITLE DISPLAY: Show the "COVERT" text in the camera title position or not.

5.2.5 SPOT

SPOT MODE

- **MANUAL**: Manually select the channel of spot monitor.
- **EVENT**: Event channel will be displayed automatically on spot monitor.
- **SEQUENCE**: Every single channel will be switching and displaying in sequence.

SPOT SEQUENCE TIME

The duration of spot sequence can be set from 1SEC to 60SEC. The default is 3SEC.

VIDEO LOSS SKIP

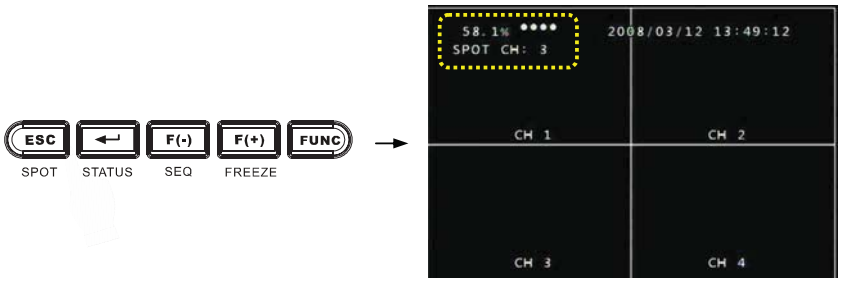
If you select “ON”, loss images will be skipped. The default is ON.

5.2.5.1 SPOT Mode Operation

Manual Mode

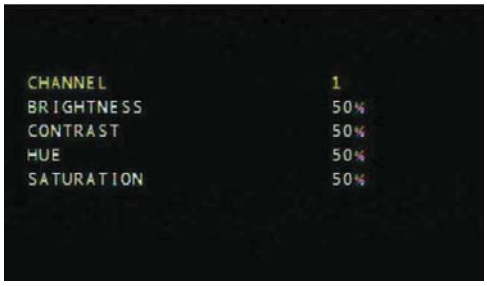
① Press the “SPOT” button on the front panel to toggle “SPOT” mode indicated on the main monitor.

② Press a camera button to display that camera on the spot monitor.



5.2.7 CAMERA

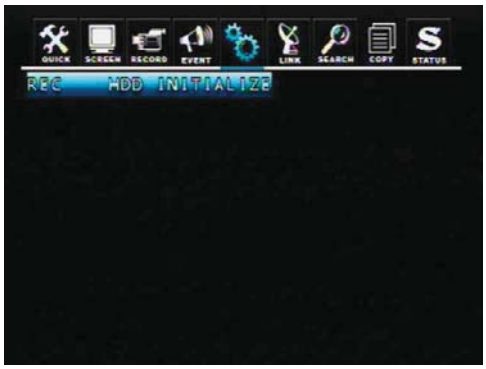
Change the values shown on the screen to adjust the BRIGHTNESS, CONTRAST, HUE and SATURATION of each channel.



The value is from 0% to 100% and the default is “50%”.

5.3 SYSTEM

5.3.1 HDD



REC HDD INITIALIZE: Select YES and press ENTER button to format the HDD.

Note: All data will be cleared after initialized. Please be careful.

5.3.2 CLOCK

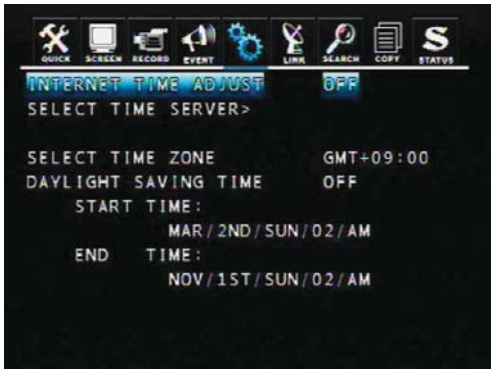
System clock adjustment.

DATE&TIME

Manually adjust the Date and Time values.

- DATE: YYYY/MM/DD YEAR/MONTH/DAY
- TIME: HH:MM:SS HOUR:MINUTE:SECOND

TIME ADJUST



- If the INTERNET TIME ADJUST is “ON”, system time will be adjusted to the time offered by the internet server.
- If the **INTERNET TIME ADJUST** is “ON”, please set the IP address of **SELECT TIME SERVER**.
- Set the correct TIME ZONE standardizing GMT (Greenwich Mean Time).
- If the DAYLIGHT SAVING TIME is “ON”, please set the starting date and time and end date.

5.3.3 VIDEO STANDARD

Select from “AUTO”, “NTSC” or “PAL”. The default is “NTSC”. If you select “AUTO”, this DVR can detect NTSC/PAL automatically.

5.3.4 LANGUAGE

Select the system language. Available languages: ENGLISH, POLISH, SPANISH, RUSSIAN, CHINESE, FRENCH, TURKISH, GERMAN, ITALIAN, PORTUGUESE.

5.3.5 REMOTE CONTROL ID

If you are operating more than one DVR in the same place and wish to use the remote controller, the remote controller ID setup is required. Otherwise, **do not change** the default set value and “ALL” should be selected.
Creates the Remote controller ID:
Select one of the numbers 11~14, 21~24, 31~34, 41~44, and then press the same number button on the supplied remote controller before the operation.

5.3.6 KEY ECHO

- ON: The beep sounds when you press any buttons on the front panel.
- OFF: The beep does not sound.

5.3.7 ADVANCED SETUP

5.3.7.1 PASSWORD CHECK

Some operation can be protected by password check.
Admin password has the highest manager authority of this DVR. Default user is Admin.
Please note! If you forget admin password, there is no way to access this DVR again.

If PASSWORD CHECK is ON, when user using following functions, system will request the password:
Record, Search&Playback, Copy, Live Audio, DVR Menu Setup, DVR Status checking and PTZ control.

5.3.7.2 SET PASSWORD

Select the administrator or user1~4 to change the password and then press “ENTER” button.

Insert your desired password and retype again using the CAMERA/ NUMBER INPUT buttons.

NOTE:
- You can use only 0~9 number buttons to setup the PASSWORD.
- The default passwords as:
  ADMIN is 11111111,
  USER1 is 22222222,

USER2 is 33333333,
USER3 is 44444444,
USRE4 is 55555555.

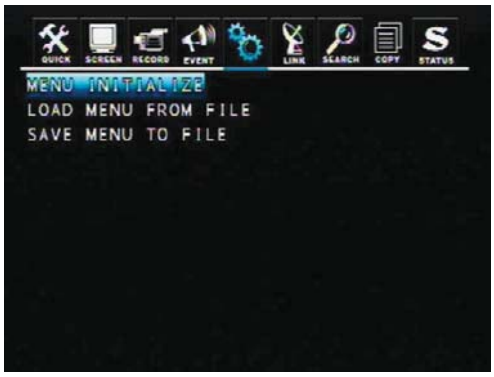
CAUTION:
For security reason, please change the password after purchasing

5.3.7.3 USER AUTHORITY

You can give different user with independent authority by this setting. ON means user can use the specific function.

AUTHORITY U1 U2 U3 U4
REC OFF OFF OFF OFF
SEARCH&PLAY OFF OFF OFF OFF
COPY OFF OFF OFF OFF
LIVE AUDIO OFF OFF OFF OFF
DVR SETUP OFF OFF OFF OFF
DVR STATUS OFF OFF OFF OFF
PTZ CONTROL OFF OFF OFF OFF

5.3.7.4 DVR MENU SETUP



1. MENU INITIALIZE

If select YES, all menu setting will be restore to factory default.

NOTE: After initialized, HDD data will not be deleted.

2. **LOAD MENU FROM FILE**
   To download the DVR menu settings from file which saved in the USB storage device.
3. **SAVE MENU TO FILE**
   Save the menu settings to the USB storage device.

Note: To copy and upload the menu setting only from front USB port.

5.3.8 FIRMWARE UPGRADE

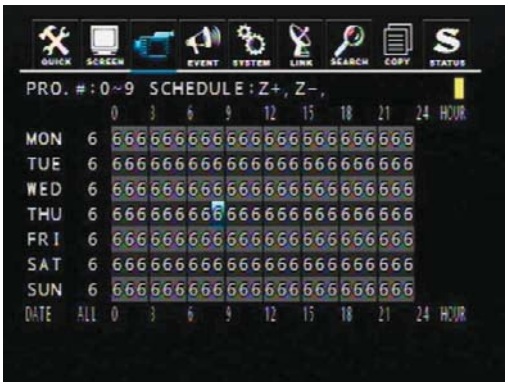
You can update the DVR firmware through the USB interface. Insert the USB device with the all.dvi file into DVR and press YES to update the firmware.

Chapter 6 Record Operation and Menu Setup

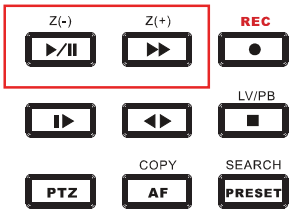
6.1 Record Operation

The DVR provide three methods of recording for your choice as following:

1. Manual Recording: You can just press the ● button on the front panel during any LIVE monitoring time. Press the RECORD button again to exit recording mode.
2. Schedule Recording: You can prearrange the recording time to do the schedule recording by "RECORD -> RECORD SETUP" menu. When the time matched, DVR will according to the RECORD PROGRAM settings to do the recording.


QUICK SCREEN EVENT SYSTEM LINK SEARCH COPY STATUS
PRO.#:0~9 SCHEDULE:Z+,Z-,
0 3 6 9 12 15 18 21 24 HOUR
MON 6
TUE 6
WED 6
THU 6
FRI 6
SAT 6
SUN 6
DATE ALL 0 3 6 9 12 15 18 21 24 HOUR

You can select the desired record time on the RECORD PROGRAM schedule, press Z(+) button to enable the schedule record. The time point you selected will become yellow color. When the time matched, DVR will according to the RECORD PROGRAM settings to do the recording. To cancel the scheculd record, please move the cursor to the time point with yellow color and then press Z(-) button.



3. Event Recording: DVR provides many kinds of Event setup; VIDEO LOSS, MOTION DETECTION and ALARM; if the event occurs, the event record will be started.

Recording status will be shown on the screen as different colors ( ) according to the recording type:

- "● **(Yellow)** " : Manual Recording mode
- "● **(Green)** " : Schedule Recording mode
- "● **(Red)** " : Event Recording mode (Motion detection/ Video loss/ Sensor)
- "○ **(White)** " : Not Recording

These three recording mode all needs a corresponding RECORD SETTINGs such as IMAGE SIZE, RECORD FRAME… DVR will follow the menu setup to do the recording.

6.2 QUICK SETUP

This menu is simply used when user want to change just a few important settings.

QUICK SETUP

If QUICK SETUP setting is “ON”, DVR will record data according to the QUICK SETUP settings.
If QUICK SETUP setting is “OFF”, DVR will record data according to the Record Setup settings.

IMAGE SIZE

Select 720x480 (D1), 720x240 (Half D1) or 360x240 (CIF) as your requirement. All of the channel will record by this resolution size.

RECORD FRAME

Select the desired frame rate for normal recording. If you enable the QUICK SETUP, all the manual recording, schedule recording and event recording will use the average record frame to record. For example, if the total record frame is 120, the average record frame for each camera in a 16CH DVR is 7.5 (120 / 16 = 7.5).

NOTE:

- Recording frame rate will be: Total frame rate of resolution / Channels
  For example:
  ① 16CH DVR have a total of 240/200(NTSC/PAL) frame rates with 360x240 resolution.
  ② When you select 360x240 in the quick setup, you will have 240/16channel=15IPS per channel.(NTSC)

- Bigger resolution will have a better picture quality but the file size is bigger and the available frame rate will reduce accordingly. (720x480 is approximately 2 times bigger file size than 720x240, 720x240 is approximately 2 times bigger file size than 360x240)

EVENT

Select a kind of EVENT of “ALL”, “ALARM”, “V-LOSS”, “MOTION”, “ALARM&LOSS”, “ALARM&MOTION”, “LOSS&MOTION”, “OFF”. The default is “ALL”.
If you want to select all kind of event, choose “ALL” and if you don’t want event recording, choose “OFF”.

PRE RECORD TIME

When video loss, alarm or motion is detected, DVR will store pre-recorded data during the selected time. The

pre-recording time can be set from 0 second to 5 second and the default is “5”.

POST RECORD TIME

When video loss, alarm or motion is detected, DVR will store post-recorded data during the selected period. The post-recording time can be set from 0 second to 60 second and the default is “10”.

AUDIO RECORD

Select ON or OFF to record or not record audio.

REMOTE CONTROL ID

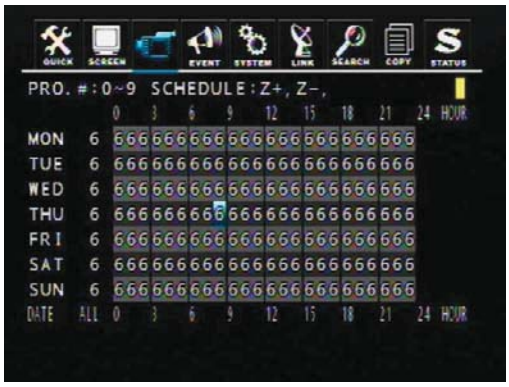
If you are operating more than one DVR in the same place and wish to use the remote controller, the remote controller ID setup is required. Otherwise, **do not change** the default set value and “ALL” should be selected. Creates the Remote controller ID:

Select one of the numbers 11~14, 21~24, 31~34, 41~44, and then press the same number button on the supplied remote controller before the operation.

6.3 RECORD SETUP

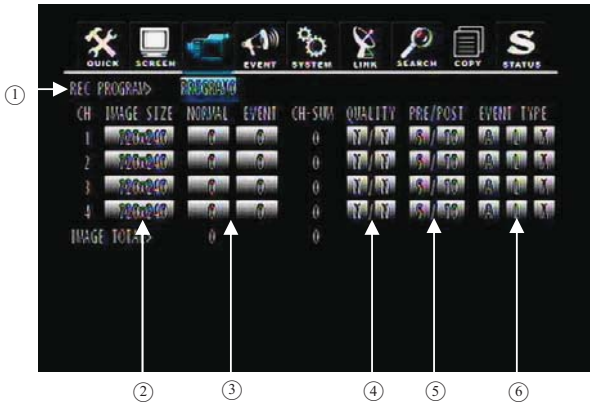
If QUICK SETUP setting is “OFF”, DVR will record data according to the RECORD SETUP settings. DVR provides 10 RECORD PROGRAMs, user can use RECORD SETUP menu to arrange the different RECORD PROGRAMs to different time point. For example, you can use higher recording frame to record on workday, and use lower recording frame on weekend. The default RECORD PROGRAM is PROGRAM6.

RECORD STATUS: You can find the present RECORD PROGRAM setting in the DVR STATUS page.



FIXED HDD TOTAL SPACE 476950 MB
FIXED HDD FREE SPACE 152724 MB
RECORD PROGRAM PROGRAM6
USB STORAGE NOT INSTALL
USB CD/DVD NOT INSTALL
SOFTWARE VERSION T_018_Y
HARDWARE VERSION 1.1

User can adjust each camera settings in the RECORD PROGRAM menu. There are 10 preset RECORD PROGRAMs (PROGRAM 0 ~ PROGRAM 9) for your choice and you can manual change these values on your demand.



- **REC PROGRAM**: Select the RECORD PROGRAM (PROGRAM 0 ~ PROGRAM 9) you want, and change the settings on your demand. QUICK SETUP use PROGRAM 0 as the record settings.
- **IMAGE SIZE**: There are three image sizes for your choice: 720x480(D1), 720x240(Half-D1) and

360x240(CIF).

- Set the RECORD FRAME for each camera:
  - **NORMAL**: Normal record frame.
  - **EVENT**: Event record frame.
- **QUALITY**: Set the record quality of normal recording and event recording. There are three record qualities: Fine(F)/ Normal(N)/ Low(L).
- **PRE/POST**: Set the time period of PRE RECORD TIME and POST RECORD TIME.

PRE RECORD TIME is 0~5 sec, the default is 5 sec. POST RECORD TIME is 0~60 sec, the default is 10 sec.
NOTE: The PRE RECORD TIME and POST RECORD TIME are not suitable in NORMAL RECORD mode.

- **EVENT TYPE**: A: Alarm/ L: Video Loss/ M: Motion Detection / -: N/A.

6.4 EVENT SETUP

Event Record: DVR provides many kinds of Event setups; VIDEO LOSS, MOTION DETECTION and ALARM; if the event occurs, the event record will be started.

6.4.1 MOTION DETECTION

Through the MOTION DETECTION menu setup, DVR can detect whether the motion occurs or not to start recording or do related actions.

CHANNEL

Set the camera channel of MOTION DETECTION.

SENSITIVITY

The higher the number is, the more sensitive. The default is 3.

AREA SETUP

Move the cursor to the desired area and press ENTER button to save it. Press Z(+) button to select whole area, press Z(-) button to deselect whole area.

Mouse operation: Right button click (without releasing the button) and drag the mouse to select the area.
AREA SETUP grid: 30 x 24

TEST MOTION

Test the MOTION DETECTION to see if it matches your demand.

6.4.2 EVENT SCREEN MODE

SCREEN HOLD: Keeping the current screen even if the event occurs.

EVENT FULL: Display the full screen of the channel which the event occurs.
EVENT MULTI: Display the multi-screen when the event occurs.
EVENT F_RTN: Display the full screen of the channel which the event occurs and return.
EVENT M_RTN: Display the multi-screen when the event occurs and return.

6.4.3 EVENT MESSAGE

ON: The warning message will be displayed when the event occurs.

6.4.4 EVENT MESSAGE RESET

Set the time to reset the OSD event message from 1SEC to 30SEC. The default is “5SEC”.

6.4.5 EVENT BUZZER

ON: The buzzer will sound whe event occurs. The default is “OFF”.

6.4.6 EVENT RECORD

When QUICK SETUP is ON:

EVENT
Set the EVENT RECORD item. Select a kind of EVENT of “ALL”, “ALARM”, “V-LOSS”, “MOTION”, “ALARM&LOSS”, “ALARM&MOTION”, “LOSS&MOTION”, “OFF”. The default is “ALL”.
If you want to select all kind of event, choose “ALL” and if you don’t want event recording, choose “OFF”.

PRE RECORD TIME
When video loss, alarm or motion is detected, DVR will store pre-recorded data during the selected time. The pre-recording time can be set from 0 second to 5 second and the default is “5”.

POST RECORD TIME
When video loss, alarm or motion is detected, DVR will store post-recorded data during the selected period. The post-recording time can be set from 0 second to 60 second and the default is “10”.

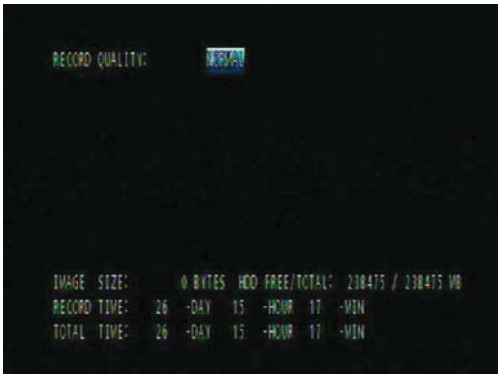
When QUICK SETUP is OFF:

Please assign the event type in the RECORD PROGRAM menu and set the EVENT CHECK to ON.

6.5 OTHER RECORD SETUP

6.5.1 PREVIEW QUALITY

After the DVR and cameras installed, DVR will calculate how long the installed HDDs can record automatically. When use this function, DVR can't in any record mode.



you can see the size of each image quality and how long you can record in the installed HDDs by the PREVIEW QUALITY.

NOTE:

RECORD TIME: A period how long you can record in free space of installed HDD(s) by setting of Max. frame rate.

TOTAL TIME: A period how long you can record in total installed HDD(s) by setting of Max. frame rate.

** The better image quality means the bigger file size; the lower image quality means the smaller file size.

6.5.2 AUDIO RECORD

If the QUICK SETUP is OFF, when you want to record audio, the AUDIO RECORD in the RECORD SETUP must set to ON.

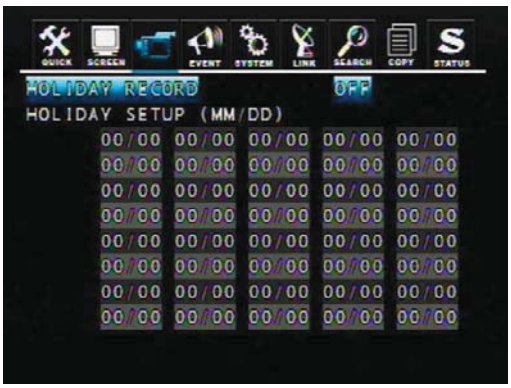
6.5.3 REPEAT RECORD

ON: When repeat recording, if the HDD is full, DVR will overwrite the recorded data automatically.
OFF: Stop to record when the HDD is full.
REPEAT RECORD ALARM: When the rest capacity of HDD matches the setting value, DVR will stop to write datas into HDD and show the warming message on the screen. The setting value is 5% ~ 10%.

6.5.4 PLAY MODE

FRAME: It will playback images in frame mode which is useful for recorded images in high frame rate. This may occur moving artifact with recorded images in low frame rate.
FIELD: It will playback images in field mode. This reduces the resolution, but is suitable for recorded images in low frame rate.

6.5.5 HOLIDAY

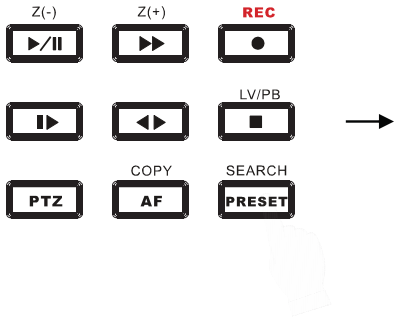


You can preset some specific days as holiday, when HOLIDAY RECORD enabled, no matter the manual recording or schedule recording, DVR will record as SUNDAY RECORD PROGRAM on these days which you set in HOLIDAY list. Expect the QUICK SETUP enabled.

Chapter 7 Search Operation and Menu Setup

SEARCH&PLAYBACK

If you want to search the specific record data, you can enter the SEARCH menu through the main menu or press the SEARCH button on the front panel.



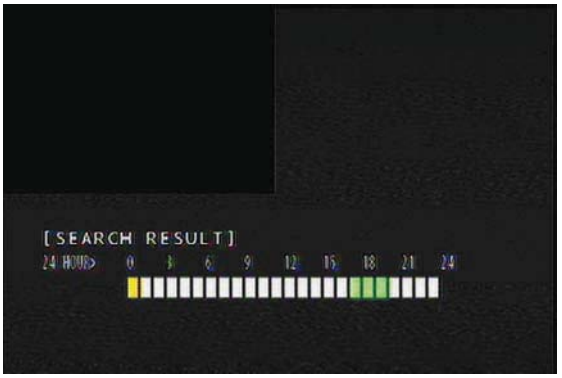
Instant Playback

Press the (DIRECT) button in the LIVE mode, DVR will switch to the PLAYBACK mode instantly and start to play from the button pressing time. Press the DIRECT button again will switch the playback direction.

Press the LV/PB ( ) button in the PLAYBACK mode, DVR will switch back to LIVE mode.

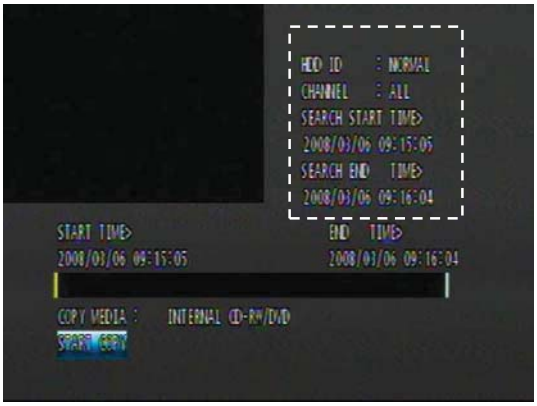
7.1 CALENDAR SEARCH

You will see a calendar after you enter the CALENDAR SEARCH menu, the date displayed as yellow means it has record data. Move cursor to the desired date and press ENTER button, the TIME SCALE will appear. The hours include record data will be shown as green. Select the desired time and press ENTER button, DVR will start to play.



7.2 SEARCH&COPY

You can search the record data from HDD and copy to specific storage device.



HDD ID: The HDD (HDD0, HDD1) which the record data saved. The default is NORMAL. The START TIME and END TIME of the selected record data will be shown on the screen. ◦

CHANNEL: Select to playback signal channel or all channels.

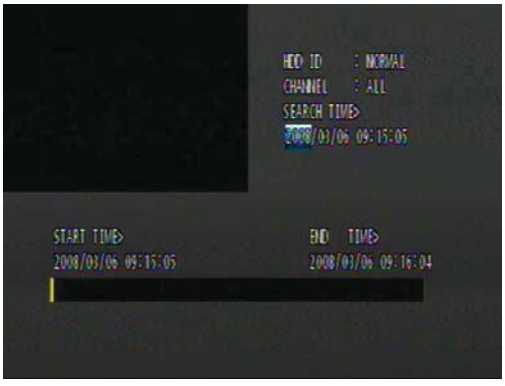
Select the desired HDD ID, CHANNEL, TIME, and press the ENTER button then you can playback.

Press ESC button to go back to the previous menu.

Make sure the record data was correct and select the storage device you want, then move the cursor to START COPY and press ENTER to copy.

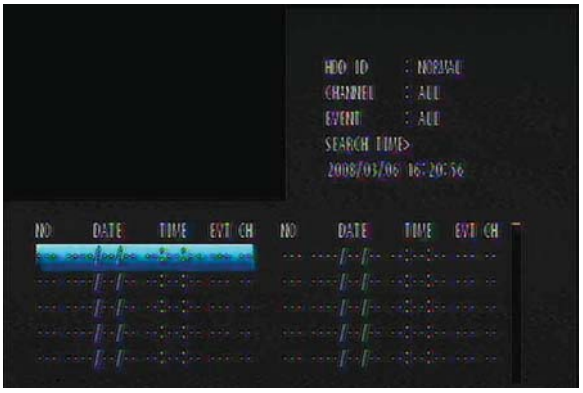
7.3 TIME SEARCH

Search the record data according to the assigned time. Select the desired HDD ID, CHANNEL, TIME, and press the ENTER button to playback.



7.4 EVENT SEARCH

Search the record data according to the event. For example, you can see how many MOTION events during the assigned time period.



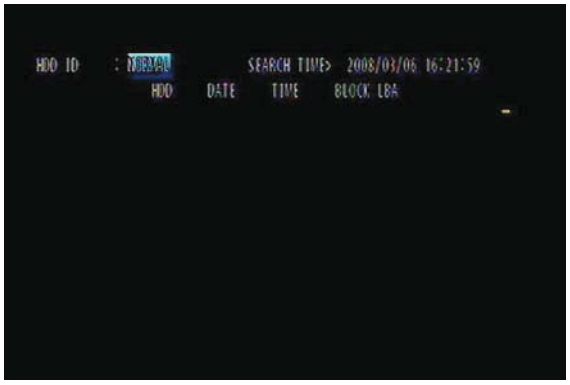
Select the desired HDD ID, CHANNEL, EVENT, TIME and press the ENTER button, the search relausts will be shown. Select the desired event and press ENTER to playback.

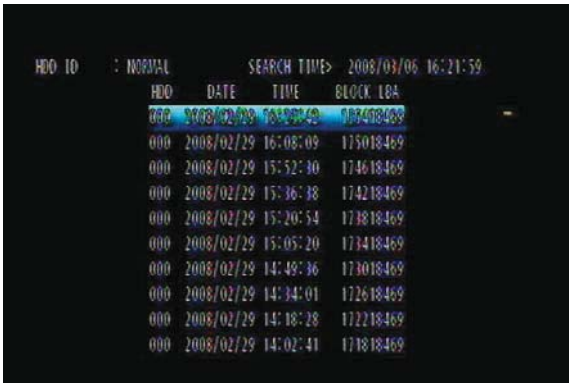
NOTE:
- When video loss is detected, up to five seconds of pre-recording data is stored on the HDD and the details will be listed in the EVENT LIST. The beep sounds will flicker. Press the ALARM RESET button to remove this signal.
- When the unit receives a signal from the sensor input, DVR begins to record the input data according to the PRE/POST TIME in the RECORD setup and the details will be listed in the EVENT LIST.

CAUTION
- If the internal HDD(s) is initialized, all of the event images will be deleted.
- When the unit is in normal recording status, the pre-recording will not be executed.

7.5 BLOCK SEARCH

Search the record data according to the data block in the HDD. If you fail to search by the other way or the HDD is broken, you can use the BLOCK SEARCH for HDD raw data search.

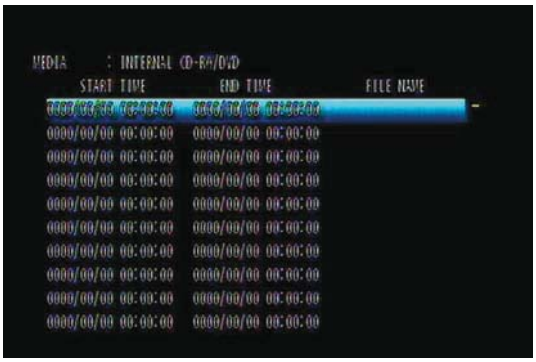




Select the desired HDD ID, TIME, BLOCK and press the ENTER button, the search relausts will be shown. Select the desired block and press ENTER to playback.

7.6 FILE SEARCH

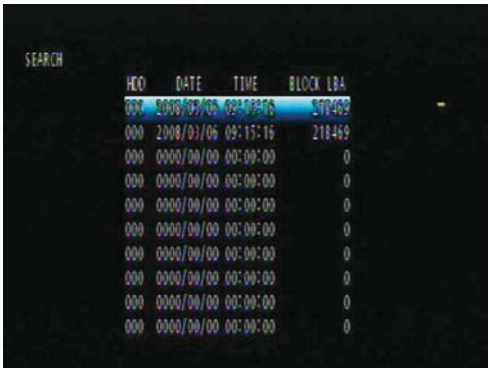
Search the record data according to the record file in the storage device. If user has more than two DVRs which are the same model (with the same file format), you can save the record data of one DVR to external storage device and play the data on the other DVRs.



Select the desired storage device and press the ENTER button, the search relausts will be shown. Select the desired file and press ENTER to playback.

7.7 BOOKMARK SEARCH

Search the record data according to the BOOKMARK.

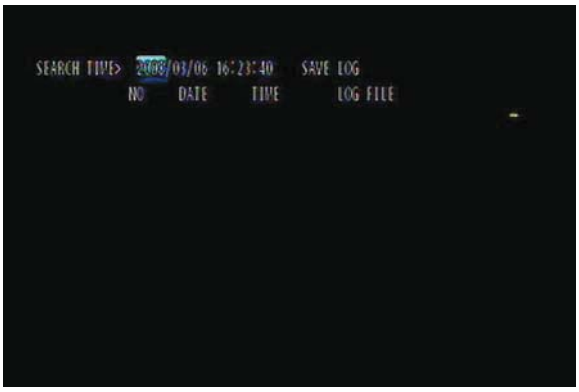


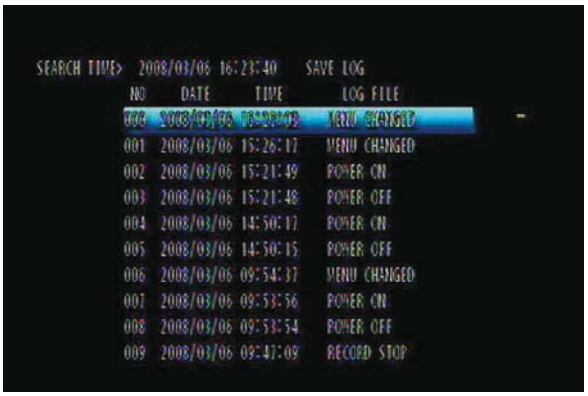
Enter the BOOKMARK SEARCH menu and press the ENTER button.
Select the desired BOOKMARK, and press the ENTER button to playback.

<How to make a BOOKMARK>
In the PLAYBACK mode:
① Find the desired screen and then press the “PLAY/PAUSE” button to freeze the screen.
② Press the “PTZ” button to make a bookmark.

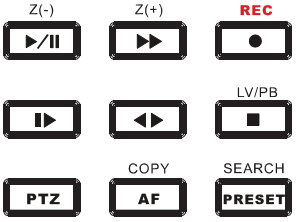
7.8 LOG FILE SEARCH

DVR can store 20,000 records in the LOG file. When following important event occurs, DVR will generate a record in the LOG file: Power on/off, Record on/off , Menu Change and Network Connection.





7.9 SEARCH BUTTON INFORMATION



SLOW (▮▶)

Press this button to make the speed level which is slower than normal speed (X1) and displayed it at the upper left side of screen as below; (If you press this button again, the playback speed will be changed in the order of the below seven speed level).

① ▮▶ 1/2 - 2 times slower than normal playback speed
② ▮▶ 1/4 - 4 times slower than normal playback speed
③ ▮▶ 1/8 - 8 times slower than normal playback speed
④ ▮▶ 1/16 - 16 times slower than normal playback speed
⑤ ▮▶ 1/32 - 32 times slower than normal playback speed
⑥ ▮▶ 1/64 - 64 times slower than normal playback speed
⑦ ▮▶ 1/128 - 128 times slower than normal playback speed

PLAY / PAUSE (▶/II)

Press this button to begin playback at normal speed (X1). Press this button again to pause the playback.

FAST (▶▶)

Press this button to make faster the speed level which is higher than normal speed (X1) and displayed at the upper left side of screen as below:

① ▶▶ 2 - 2 times faster than normal playback speed
② ▶▶ 4 - 4 times faster than normal playback speed
③ ▶▶ 8 - 8 times faster than normal playback speed
④ ▶▶ 16 - 16 times faster than normal playback speed
⑤ ▶▶ 32 - 32 times faster than normal playback speed
⑥ ▶▶ 64 - 64 times faster than normal playback speed
⑦ ▶▶ 128 - 128 times faster than normal playback speed

(However much data may be recorded can be searched in 3 seconds)

DIRECTION (◀▶)

Press this button to change direction to forward (▶) or backward (◀) in playback mode.

<A-B SECTION REPEATE PLAYBACK>

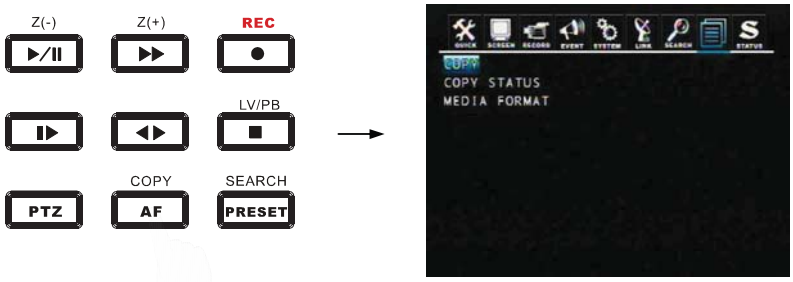
① Press “PAUSH” button on the desired position you want to playback.
② Then press the “SEQ” button to set up the SECTION A position (Starting Position).
③ Press “PLAY” button to continue playback to find out the end position.
④ Press “PAUSH” button on the end position.
⑤ Press the “FREEZE” button to set up the SECTION B position (End Position).
⑥ Press the “PLAY” button then you can do the A-B SECTION REPEATE PLAYBACK.

<CANCEL A-B SECTION REPEATE PLAYBACK >

① Press the “PIP” button and the section repetition playback will be canceled.

Chapter 8 Copy Operation and Menu Setup

To copy the DVR record data, you can enter the COPY menu through the main menu or press the COPY button on the front panel.

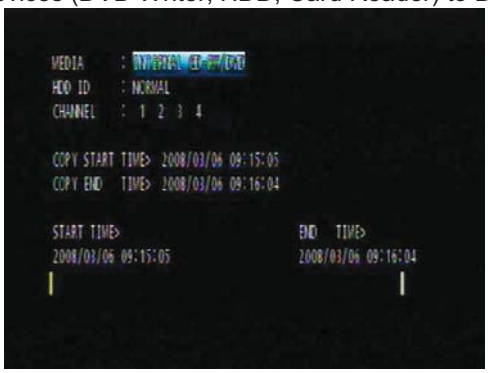


8.1 COPY

Copy the record data from DVR internal HDD to external storage device.

8.1.1 Copy to USB Storage Device

First, please connect the USB devices (DVD Writer, HDD, Card Reader) to DVR and enter the COPY munu:



MEDIA: Select USB_FRONT

HDD ID: The HDD (HDD0, HDD1) which the record data saved. The default is NORMAL (search data in all HDDs).

CHANNEL: Select to copy signal channel or all channels.

Select the desired MEDIA, HDD ID, CHANNEL, COPY START TIME, COPY END TIME and press the ENTER button to start the copy.

NOTE:

- You can see a password input message. Please input the password by the numeric buttons or press ECT button to cancel.
- You'll need this password when opening the file in the network viewer.
- When the copy is in process, the copying status (ex. "COPY 30%") will be displayed on the right side of the monitor.
- **Strong recommend you to format the USB storage device before use.**

8.1.2 Copy to DVD±RW

Put the DVD±RW into DVD-ROM and enter the COPY menu:

Select the desired MEDIA (INTERNAL CD-RW/DVD), HDD ID, CHANNEL, COPY START TIME, COPY END TIME and press the ENTER button to start the copy.

NOTE:

- You can see a password input message. Please input the password by the numeric buttons or press ECT button to cancel.
- You'll need this password when opening the file in the network viewer.
- When the copy is in process, the copying status (ex. "COPY 30%") will be displayed on the right side of the monitor.

8.1.3 STOP COPY

If you press the COPY button during the COPY process, you'll enter the COPY munu. Select the COPY item, the following screen will appear, press "YES" to stop the COPY process.

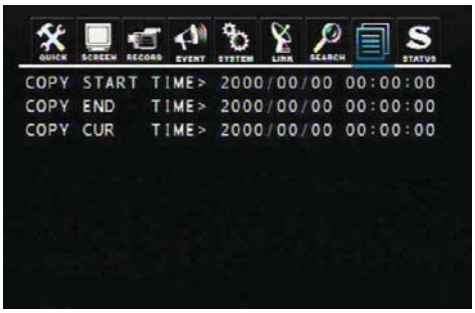
8.1.4 CONTINUE COPY

If the storage device full or error occurs during the COPY process, the "MEDIA FULL OR FAIL PRESS [COPY]" message will be shown on the screen. Press COPY button, the following screen will appear:

CONTINUE COPY: After change a new media, the COPY process will be continued.
FORMAT MEDIA: Format the present storage device.

8.2 COPY STATUS

Review the status of the present COPY process.



COPY CUR TIME: Indicate current copying situation among the total copying data.

8.3 FORMAT MEDIA

To make sure the correctness of COPY, we strong recommend you to format the storage media before use.

NOTE: ALL DATA WILL BE REMOVED AFTER FORMAT.

Select the FORMAT MEDIA and move the cursor to MEDIA FORMAT, then press ENTER to format. The message, “FORMATTING” will be displayed while formatting.

NOTE:
If you don’t connect any media, you will see the message, “Fail”

Chapter 9 Network Setup and Operation

9.1 NETWORK SETUP

- This DVR support dynamic IP and static IP.
- Remote view from Internet Explorer or DVR Viewer software. DVR Viewer provide plenty functions include menu setup. IE support only simple viewing and playing.
- This DVR doesn't support xDSL, there is a DYNAMIC IP SERVER, but no PPPoE protocol.

<Dynamic IP>

DHCP

DHCP is a protocol for assigning dynamic IP addresses to devices on a network., if you want to use dynamic IP, please set the DHCP to "ON". DVR will get IP/ SUBMASK/ DNS from DHCP server automatically.

Note:

When the function "DHCP ON" has been selected, please follow one out of the two steps below:

1. First connect the network line and then reboot the DVR.
2. Connect the network line (without rebooting the DVR), enter menu setup, and then select "save and exit" to quit the menu setup.

<Static IP>

If you want to use static IP, please set the "DHCP" to "OFF". Then just input the IP/ SUBMASK/ GATEWAY/ DNS and PORT (The default port is 5400) to finish network setup.

NOTE: Port setting on DVR and client viewer software must be matched.

DYNAMIC IP SERVER

After connecting to network, DVR will register its MAC address and IP address to the default DYNAMIC IP SERVER. If you want to remote access the DVR through DVR Viewer, but unknown the IP address (ex. Dynamic IP), you can connect to DVR with the MAC address, DYNAMIC IP SERVER will find out the correct DVR IP address automatically.

NOTE: The IP address of DYNAMIC IP SERVER is a default value, we don't recommend you to change it.

BACKUP IP SERVER

The function of the BACKUP IP SERVER is the same with DYNAMIC IP SERVER and just for backup. If the DYNAMIC IP SERVER is out of service, the BACKUP IP SERVER will provide service instantly.

NETWORK FRAME

Select the desired value to select an image frame to be transported from DVR to network client viewer.

Note:
NETWORK FRAME is use for the transported image being influenced by Network speed.
- STILL: Use when the local network speed is too slow.
- MOTION: Use when the normal situation of network speed.

9.2 DVR-VIEWER INSTALLATION

9.2.1 System Requirement

- CPU: Pentium 4 above
- O/S: Microsoft Windows 2000 / XP / VISTA
- RAM: 128MB RAM above
-Video Card: Super VGA 16M above
-Network card: 10/100 base T network card for LAN operation

9.2.2 Network Environment

	PC	DVR
Minimum Requestment	> 1Mbps	> 0.5Mbps
Recommended (16 Frames/Sec)	> 3Mbps	> 3Mbps

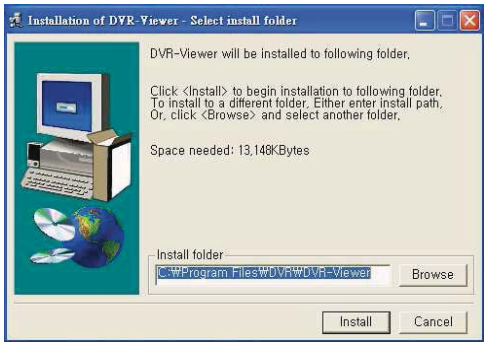
∗ The image transmission rate is depending on the login users of DVR.

9.2.3 Installation Steps

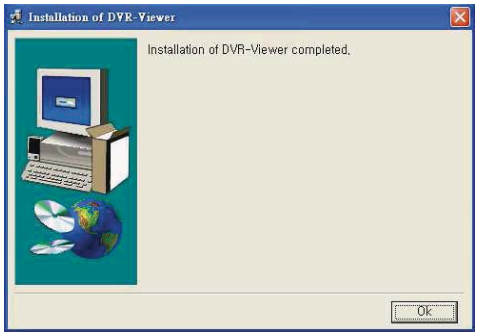
Please insert the DVR-Viewer CD into CD-ROM drive and executes the Setup.exe program:

Installation of DVR-Viewer
This will install DVR-Viewer on your computer.
It is recommended that you exit all other programs before proceed with installation.
Click <Next> to continue installation.
Or, click <Cancel> to cancel installation.
Next
Cancel

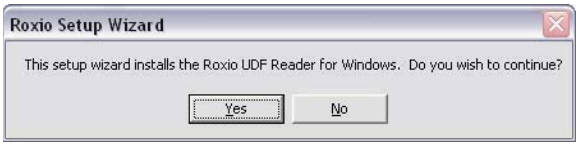
Click on “Next”.


Installation of DVR-Viewer - Select install folder
DVR-Viewer will be installed to following folder.
Click <Install> to begin installation to following folder.
To install to a different folder, Either enter install path,
Or, click <Browse> and select another folder.
Space needed: 13,148KBytes
Install folder
C:₩Program Files₩DVR₩DVR-Viewer
Browse
Install
Cancel

If you don’t need to change the default path, press “Install” to start installation.

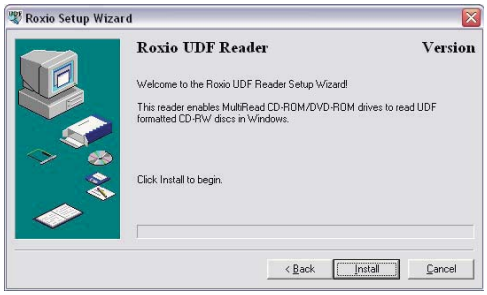


Installation DVR-Viewer completed.

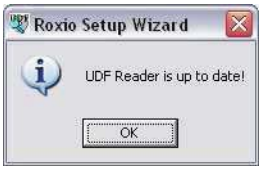


Click on “YES” to install the Roxio UDF Reader.

Click on “Next”.


Roxio Setup Wizard
Roxio UDF Reader
Version
Welcome to the Roxio UDF Reader Setup Wizard!
This reader enables MultiRead CD-ROM/DVD-ROM drives to read UDF formatted CD-RW discs in Windows.
Click Install to begin.
< Back
Install
Cancel

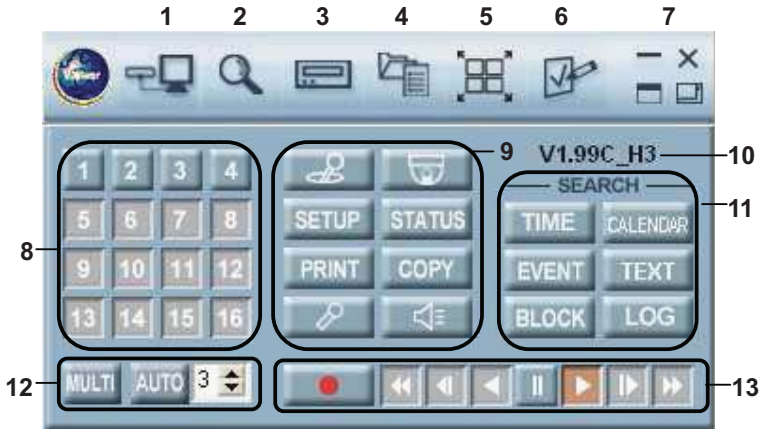
Click on “Install”.



Click on “OK” and the installation completed.

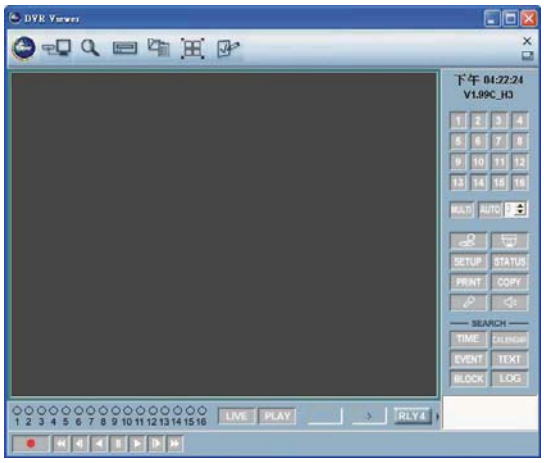
Double click the following icon to start DVR-Viewer:

9.3 DVR-Viewer Control Panel Introduction



Items	Description	
1	DVR List: Add/Modify/Delete the DVR connection list or connect to DVR.	
2	DVR Search: To scan the available DVRs within a local network area.	
3	HDD Search: To search the record data of DVR HDD connect to PC.	
4	File Search: Search by record files (Copy from DVR or on PC).	
5	Arrange Windows: To auto arrange the windows which open by DVR.	
6	Viewer Option: DVR-Viewer setup.	
7	Control panel switching buttons	
8	Numeric buttons/ Channel selection buttons	
9		DVR Controller: Just as the IR remote controller, mouse and the front buttons on the DVR, the client software provides a controller to control the DVR remotely.
		PTZ Controller
	SETUP	To enter the DVR Menu Setup.
	STATUS	To review the DVR status.
	PRINT	To make a screen snapshot.
	COPY	To copy the DVR images to PC.
		Audio Input: After press the button, the audio on PC can be sent to DVR through microphone.
		Audio Output: After press the button, PC user can hear the sounds from DVR.
10	The DVR-Viewer version information.	
11	Search buttons	
12	MULTI To switch the signal display mode and the multi display mode. AUTO 3 Enable/Disable the Auto Sequence mode and set the switching time.	
13	Record and Playback buttons.	

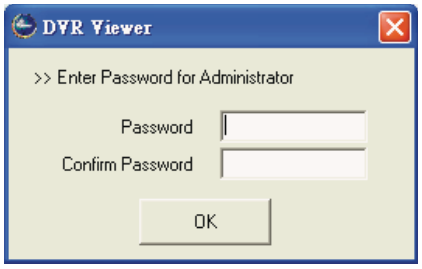
Press button to switch to full screen mode.



9.4 DVR-Viewer Operation

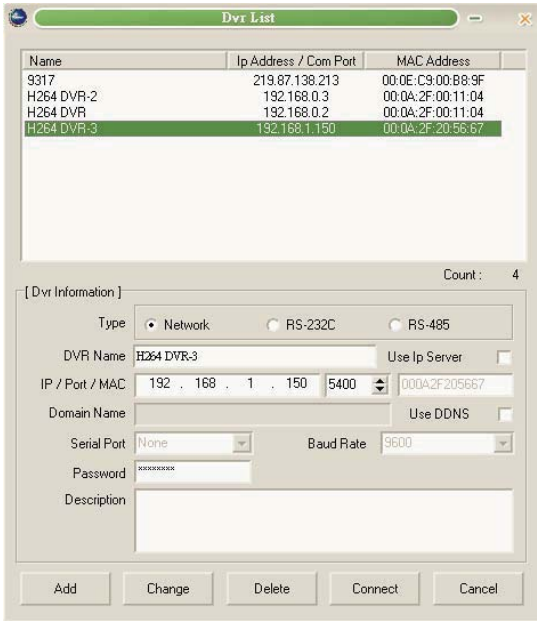
9.4.1 DVR-Viewer Software Password

When the DVR Viewer is run for the first time, it prompts for the administrator's password. When you run the software in the future, you'll need this password. If you don't want to set a password, please keep it empty. Click on OK to start the program.



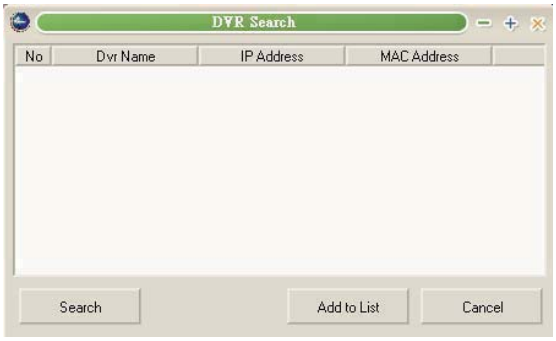
9.4.2 DVR List

Click on DVR List and input the password, the following window appears:



Add

① You can click on the DVR Search button ( ) to auto scan the available DVRs in a local network area:



Press “Search” button to scan the DVRs, select the desired DVR and press “Add to List”. The selected DVR will be added to the DVR List.

② Or input the DVR connection information directly, then click on “Add” to add a DVR.
Type: DVR connection type, select “Network” generally.
IP/Port/MAC: DVR IP address and connection port (The default is 5400). If you use dynamic IP, you can connect to DVR through the IP Server. Check the “Use Ip Server” and then input MAC address.
Password: DVR password.

NOTE:
You must input the DVR password while remote connecting. If you login with the ADMIN password, you can use all functions as in DVR, but if you login with other user’s password, you can’t modify the menu setup. The maximum login users of DVR are 16, but just allow one ADMIN user to login at a time. When one user login as ADMIN and is operating the DVR, if the other user also login as ADMIN, the first ADMIN user will be forced to exit the DVR.

Change

Select the desired DVR in the DVR List, then you can modify the DVR connection values. Press “Change” to save the values.

Delete

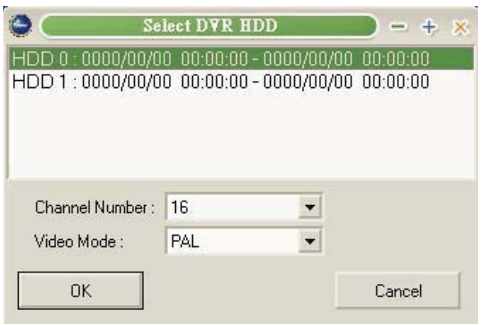
Select the DVR you want to delete and click on “Delete” button.

Connect

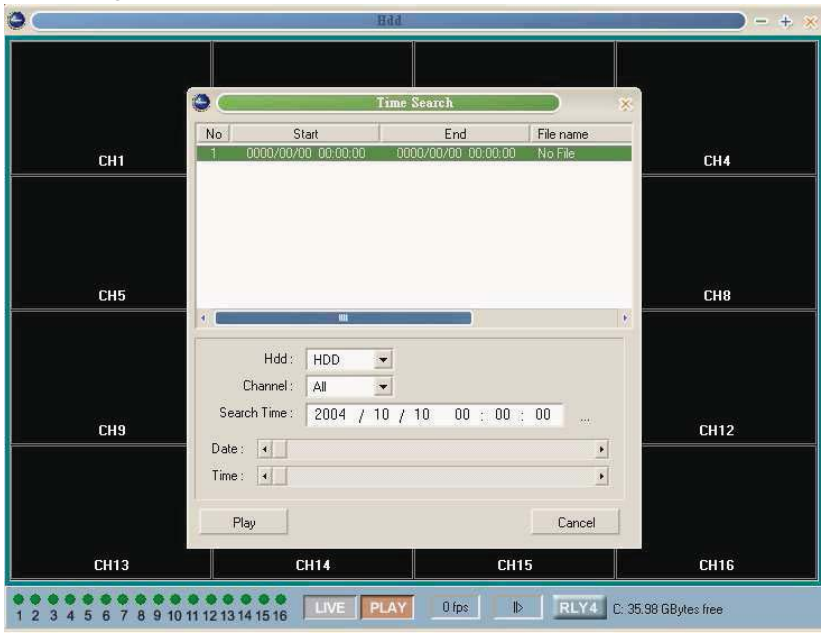
Select the desired DVR and click on “Connect” to remote connect to DVR.

9.4.3 HDD Search

Connect the DVR HDD to your PC, then you can search and playback the record data through HDD Search function.



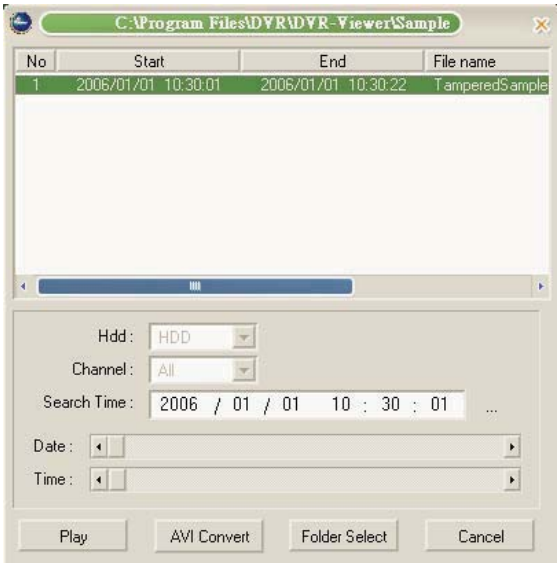
① Select the desired HDD, Channel and Video Mode.
② Press “OK”, the following window appears:



③ Select the desired Channel and Search Time under the Time Search window, click on “Play” to playback.

9.4.4 File Search

Some users copy the DVR record data to DVD or USB storage device. Then use File Search function to search and playback these data on PC.
Click on the File Search button, the following window appears:



① Select the desired search path through “Folder Select”.
② After selecting the desired Search Time, the results will be shown in above list. Select the desired file and click on “Play” to playback.
③ Click on “AVI Convert” button to convert the selected file to AVI format.

9.4.5 Arrange Windows

Arrange the windows opened by DVR-Viewer automatically.

* 1 window

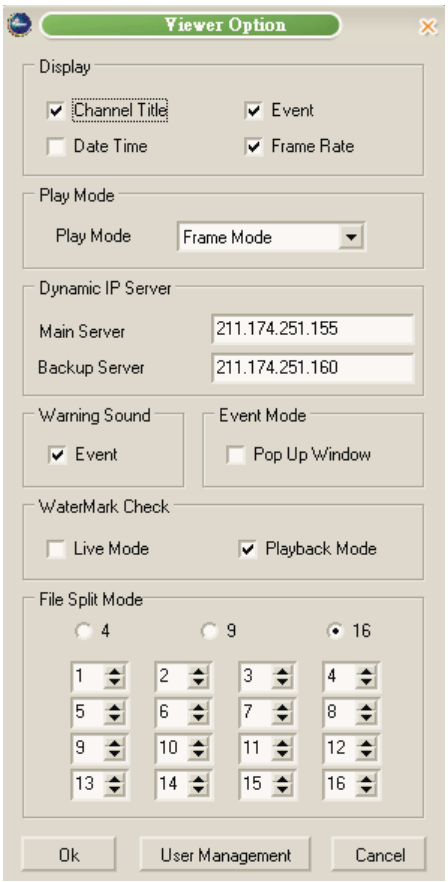
* 2 ~ 4 windows

*5 ~ 9 windows

*10~16 windows

Double click on one window in multi display mode to extend to full screen.

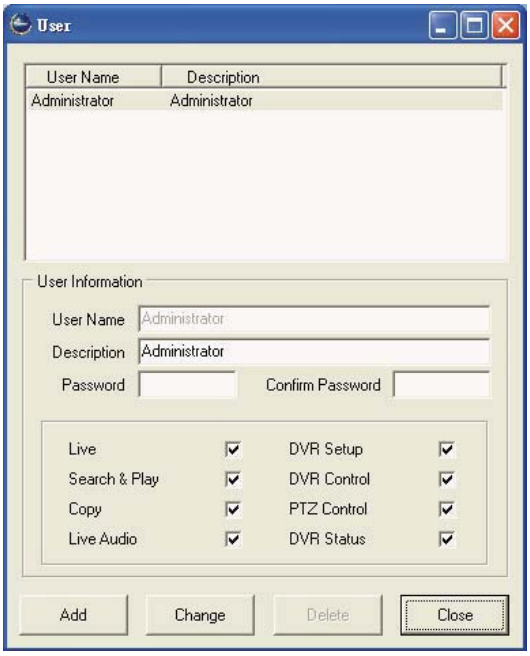
9.4.6 Viewer Option



Display:
- Channel Title: Show the Channel Title on the screen.
- Event: Show the event occured channel as Red on the screen.
- Date Time: Show the DVR date and time on the screen.
- Frame Rate: Show the Frame Rate on the screen.

Play Mode:
- Frame Mode: It will playback images in frame mode which is useful for recorded images in high frame rate. This may occurs moving artifact with recorded images in low frame rate.
- Field Mode: It will playback images in field mode. This reduces the resolution, but is suitable for recorded images in low frame rate.

Dynamic IP Server: Set the IP address of Dynamic IP Server and Backup IP Server.
Warning Sound: Check “Event” means the warning sound will be enabled while event occurring.
Event Mode: Check “Pop Up Window” means the warning window will be poped up while event occurring.
WaterMark Check: To confirm the data correctness under LIVE mode or Playback mode.
File Split Mode: User can arrange the order of channels on demand when use FILE SEARCH.
User Management: To Add/Change/Delete the users and their rights of DVR-Viewer.

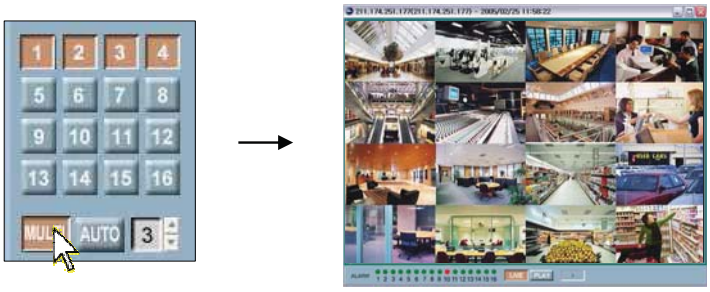


9.4.7 Display

a. Signal Display Mode: Click on the desired channel button to display as Signal Display Mode.

b. Multi Display Mode

Click on “MULTI” button to display as Multi Display Mode. Click on “MULTI” again to return to Signal Display Mode.

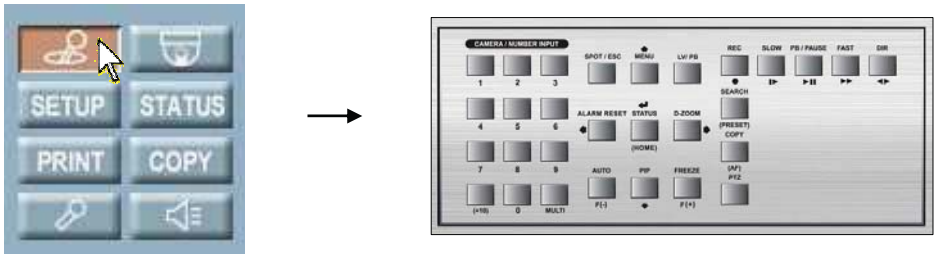


c. Auto Sequence Mode

Click on “AUTO” button to display as Auto Sequence Mode, and you can also set the sequence time.

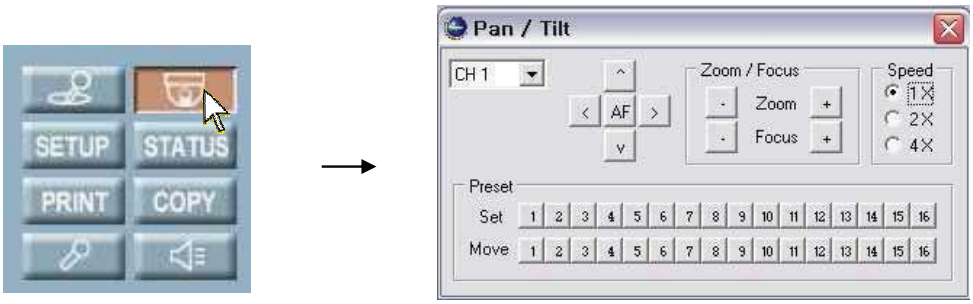
9.4.8 DVR Controller

Press “Controller” button, a control panel similar to DVR front panel will appears.



9.4.9 PTZ Controller

Use the PTZ Controller to control PTZ camera through internet.



AF: AutoFocus Adjustment

Zoom: PTZ camera Zoom in/Zoom out control

Focus: PTZ camera Focus adjustment

Preset

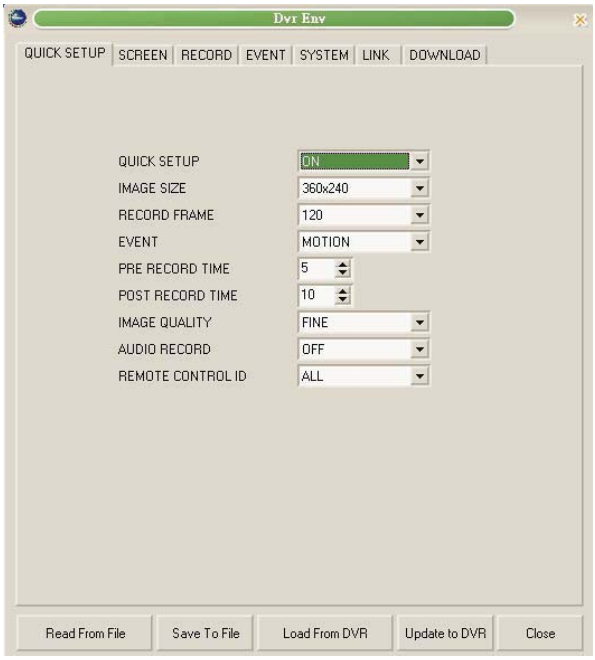
You can preset the desired PTZ camera position and save as a Preset Point. DVR provides 16 Preset Points for your setting. Adjust all PTZ camera settings and then click on any of the 16 buttons in Set line to save as Preset Point.

You can also apply the Preset Point to any PTZ camera. Select the desired channel and click on any of the 16

buttons in Move line, then the PTZ camera will move to the preset position.

9.4.10 SETUP

Click on “SETUP” button and input the DVR ADMIN password, you can enter to the DVR muen setup.

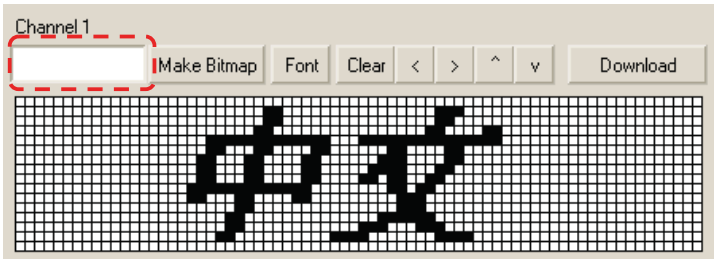


Save To File: Save the DVR menu settings to a file.
Read From File: Read the DVR menu settings from a file.
Load From DVR: Load the real time settings from DVR to PC.
Update to DVR: Update the menu settings in PC to DVR.

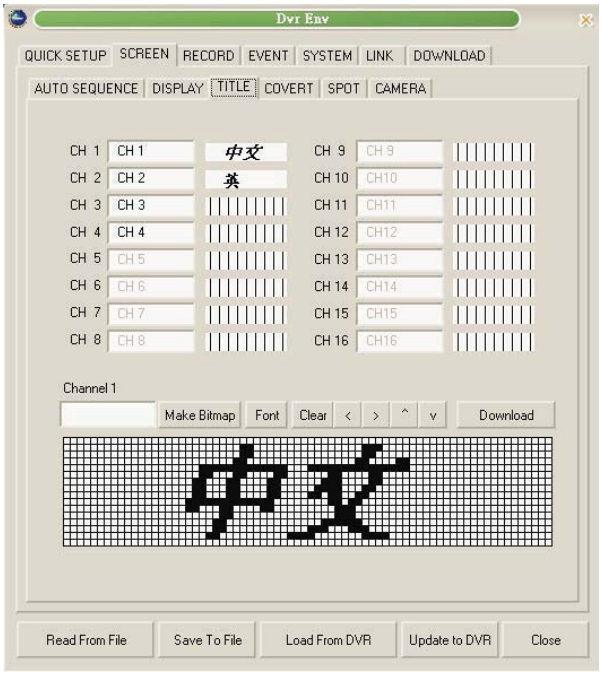
QUICK SETUP
Please refer to 6.2 QUICK SETUP.

SCREEN
You can generate a channel title as a Bitmap file and load to DVR in the SCREEN-TITLE page.

1. Input the desired words in below box, adjust the Font type and position, then click on “Make Bitmap” button to generate a Bitmap file.



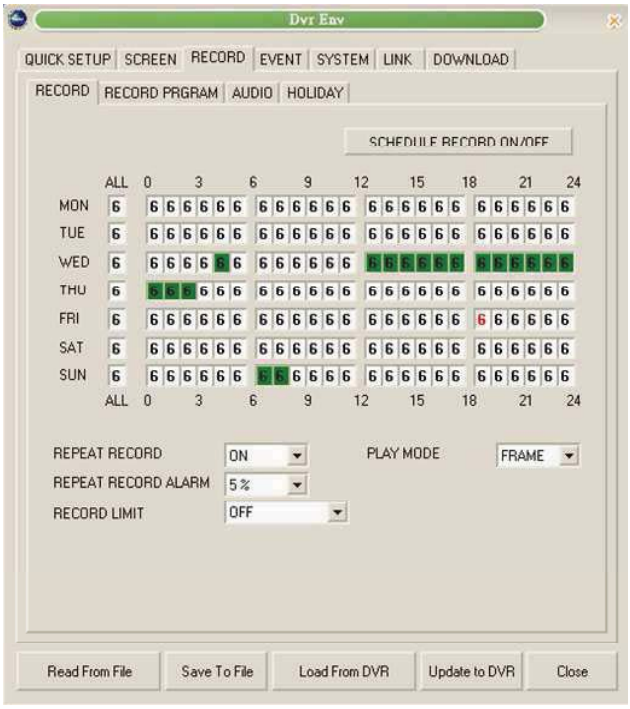
2. Click on “Download” button to load the Bitmap file to DVR. Change the Channel Title Mode to BITMAP, then you can see the new title in Bitmap mode on DVR.



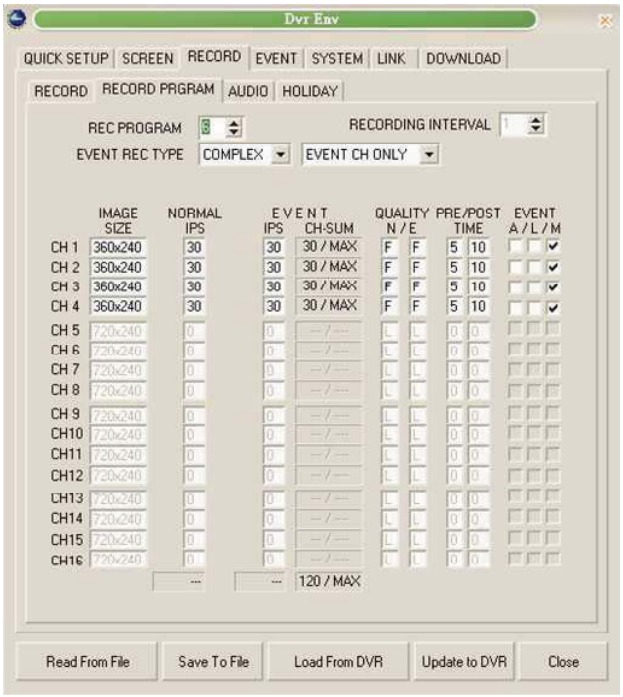
For the rest settings, please refer to 5.1.2 SCREEN.

RECORD

To set the Schedule Record, please click on an hour block and then click “SCHEDULE RECORD ON/OFF”. The enabled hour blocks will become Green.



Turn the wheel scroll of the mouse on specific hour block to change the Record Program (0~9); double click the left key of mouse, the following window appears:



For the rest settings, please refer to 6.3 RECORD SETUP.

EVENT

Please refer to 6.4 EVENT SETUP.

SYSTEM

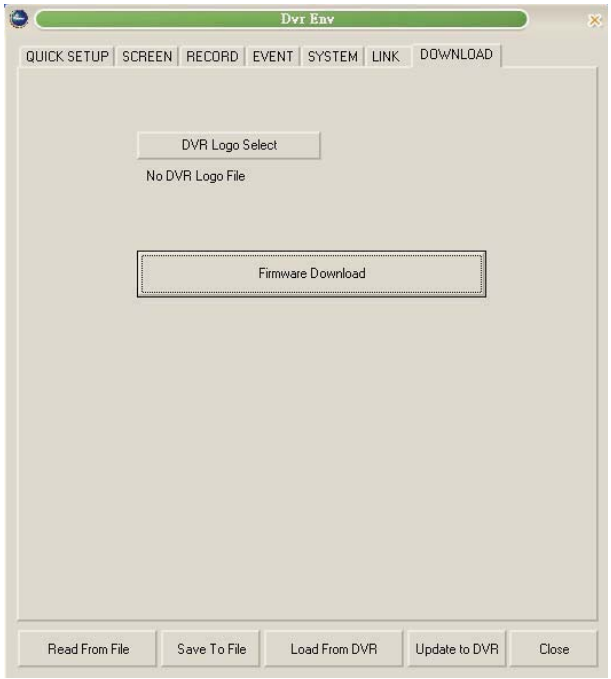
Please refer to 5.3 SYSTEM.

LINK

Please refer to Chapter 4 and 9.1 NETWORK SETUP.

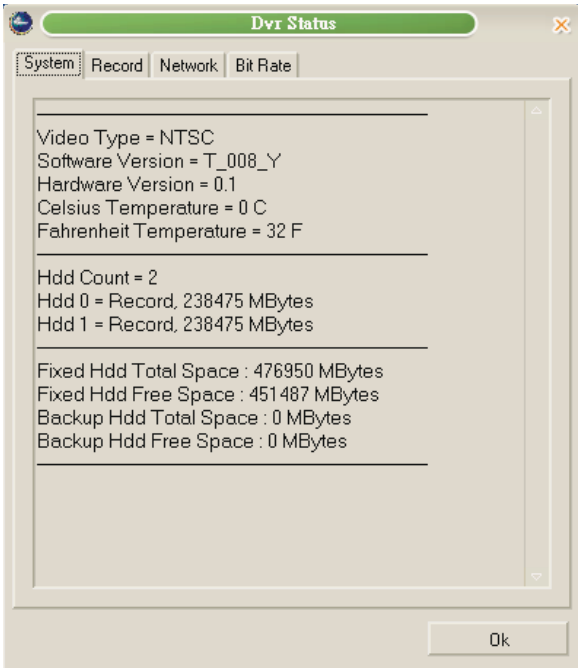
DOWNLOAD

Download the Firmware from DVR to PC.



9.4.11 STATUS

Click on “STATUS” button to review the System/Record/Network/Bit Rate status.

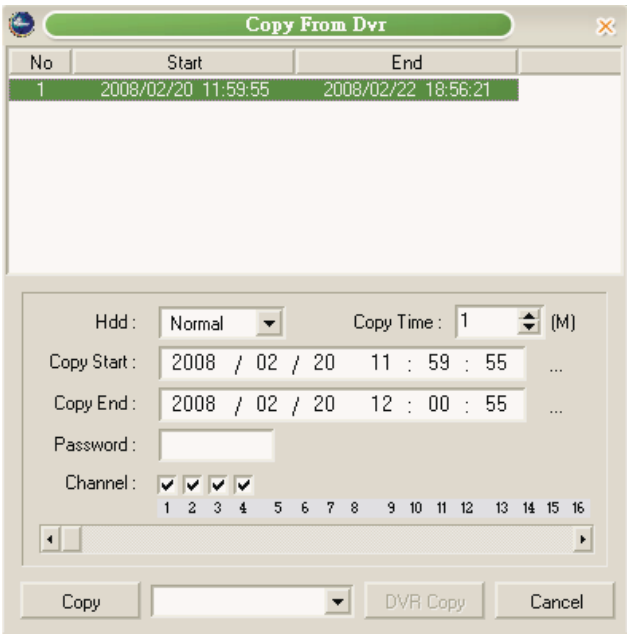

Dvr Status
System
Record
Network
Bit Rate
Video Type = NTSC
Software Version = T_008_Y
Hardware Version = 0.1
Celsius Temperature = 0 C
Fahrenheit Temperature = 32 F
Hdd Count = 2
Hdd 0 = Record, 238475 MBytes
Hdd 1 = Record, 238475 MBytes
Fixed Hdd Total Space : 476950 MBytes
Fixed Hdd Free Space : 451487 MBytes
Backup Hdd Total Space : 0 MBytes
Backup Hdd Free Space : 0 MBytes
Ok

9.4.12 PRINT

Click on the “PRINT” button to make a screen snapshot and save as a file. The size of snapshot is depend on the Record Image Size (D1、Half-D1、CIF).

9.4.13 COPY

Copy the DVR images to PC.

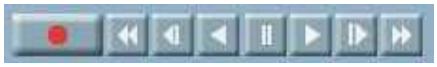


Select the desired HDD, Time and channel, click on “Copy” button to start copy. The Copying stutus will be shown as below. Click on “OK” button after the copy finished, the file will be saved in C:\Program Files\DVR \DVR-Viewer\Copy automatically.

9.4.14 SEARCH

Please refer to Chapter 7 Search Operation and Menu Setup.

9.4.15 Record and Playback Control Buttons



1 2 3 4 5 6 7

1 Fast Backward (2X~128X)
2 Playback Backward Picture by Picture (2X~128X)
3 Playback Backward
4 Paush
5 Playback Forward
6 Playback Forward Picture by Picture (2X~128X)
7 Fast Forward (2X~128X)

Record

Click on Record button to record the LIVE images on PC as a file. The file will be saved in C:\Program Files\DVR \DVR-Viewer\Save automatically.

Chapter 10 Additional Function Operation and Menu Setup

10.1 E-mail

Enter the LINK -> E-mail menu

SEND E-MAIL

Select from “ON”, “OFF”, The default is “OFF”. When SEND E-MAIL set to “ON”, DVR will send a e-mail when an event happened.

SMTP SERVER

① Move the cursor to SMTP SERVER and press ENTER button to input the IP address.

② Select the character using the ▲, ▼, ◀, ▶ buttons and then press the ENTER button.

③ To exit this CHARACTER TABLE screen, press the ESC button.

DVR E-MAIL ADDR

To set the E-Mail Receiver address when event occurs.

① Move the cursor to DVR E-MAIL ADDR and press ENTER button:

② Select the character using the ▲, ▼, ◀, ▶ buttons and then press the ENTER button.

③ To exit this CHARACTER TABLE screen, press the ESC button.

USER ID

① Move the cursor to USER ID and press ENTER button:

② Select the character using the ▲, ▼, ◀, ▶ buttons and then press the ENTER button.

③ To exit this CHARACTER TABLE screen, press the ESC button.

PASSWORD

① Move the cursor to PASSWORD and press ENTER button:

② Select the character using the ▲, ▼, ◀, ▶ buttons and then press the ENTER button.

③ To exit this CHARACTER TABLE screen, press the ESC button.

Chapter 11 Specification

MODEL NO.			DVR-4C	DVR-8C	DVR-16C
VIDEO	VIDEO SYSTEM		Auto Detection		
	INPUT		4CH BNC	8CH BNC	16CH BNC
	LOOP		-		
	MAIN OUTPUT		1CH BNC		
	VGA		Composite Video / VGA (select from front panel)		
	SOPT OUTPUT		1CH BNC		
AUDIO	INPUT		1CH RCA		
	OUTPUT		1CH RCA		
	REMOTE		-		
SENSOR	INPUT		4CH ALARM INPUT	8CH ALARM INPUT	16CH ALARM INPUT
	OUTPUT		1CH RELAY OUTPUT		
STORAGE	DEVICE		2 SATA hard disks (7,200RPM, 45MHz DMA, MAX. 1TB)		
	DVD WRITER		OPTION		
DISPLAY	DIVISION		1,4	1,4,6,7,9	1,4,6,7,9,10,13,16
	ZOOM		2X		
	OSD		Graphic OSD		
RECORDING	COMPRESSION		H.264		
	RESOLUTION		720x480, 720x240, 360x240 (NTSC) 720x576, 720x288, 360x288 (PAL)		
	FRAME RATE	NTSC	60, 120, 120FPS	60, 120, 240FPS	60, 120, 240FPS
		PAL	50, 100, 100FPS	50, 100, 200FPS	50, 100, 200FPS
	QUALITY		Fine / Normal / Low		
	RECORD MODE		Manual, Motion Detection, Sensor, Video Loss		
	WATERMARK		YES		
CONTROL	MOTION DETECTION		User selectable motion detection area for each camera individually		
			Sensitivity: 10 levels		
	ALARM	PRE	0~5 sec		
		POST	0~60 sec		
	EVENT LOG		Alarm, Motion, Video Loss, Power Loss, Power and Record on/off		
	REMOTE CONTROLLER		YES		
	PTZ CAMERA		YES		

PLAYBACK	SEARCH MODE	Time, Calendar, Event, File, Block
	SPEED	Normal, REW&FF [1x/2x/4x/16x/32x/64x/128x], Picture to Picture, Pause
	DEVICE	Internal / External HDD from USB Interface Device
	BACKUP FILE	H.264 compression and AVI format (converted by client viewer)
NETWORK	COMPRESSION	H.264
	NETWORK INTERFACE	16CH Client Viewer, Web Browser
	SPEED	120 Frames per second
	PROTOCOL	TCP/IP, SMTP, HTTP, DHCP, DDNS
	WEB BROWSER	Internet Explorer 5.0 or higher
BACKUP	INTERNAL	DVD±RW, DVD RAM
	EXTERNAL	USB HDD, USB DVD Writer, USB Memory Stick and Network Backup
SYSTEM LOG	MODE	Power Failure Check / Menu Change / Network Connection
	LOG Numbers	20,000 records
MONITORING		Software Watchdog
RECOVERY		Auto-Reboot By Watchdog
FIRMWARE UPGRADE		USB 2.0 Port (1 Port at Front Panel), Network
POWER SOURCE		DC12V